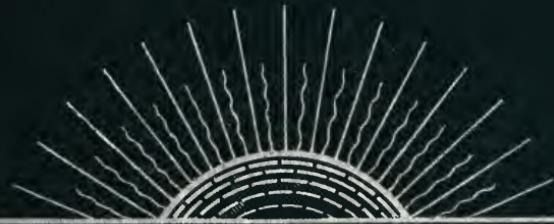


Mexico ITS
PROGRESS
AND
COMMERCIAL POSSIBILITIES.

E.J. HOWELL, F.S.S.





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J. G. Bradbury Esq
With Complts of the
MEXICO: *Author*

ITS

PROGRESS

AND

COMMERCIAL POSSIBILITIES.

BY

E. J. HOWELL, F.S.S.,

Member London Chamber of Commerce, etc.

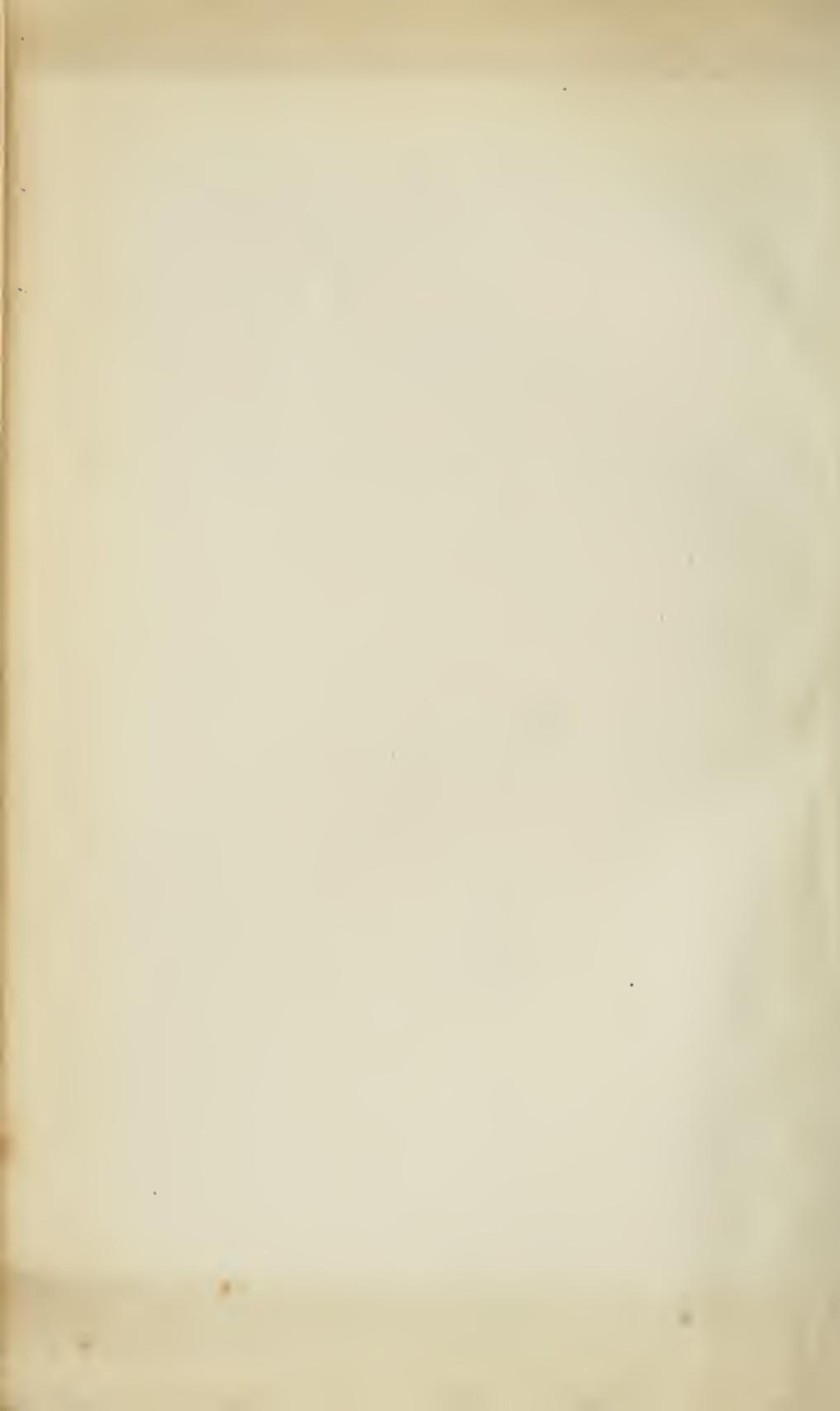


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RESPECTFULLY DEDICATED BY PERMISSION

TO

His Excellency Sir Spenser St. John, K.C. B. G.,

HER BRITANNIC MAJESTY'S MINISTER TO THE

UNITED STATES OF MEXICO,

BY

THE AUTHOR.



P R E F A C E.

IN writing these pages I have been specially anxious not to create false impressions, or to give over estimates. I have been actuated, solely and entirely, by a desire to make known the present state and position of the country as a field for British enterprise. It has been my wish and aim to present the facts in such a manner as I should expect to have them given to me were I an enquiring merchant, or an intending investor. It must be distinctly understood that I am not writing in the interests of anyone, but that I undertake the task solely with the object of dissipating the ignorance I find existing in England regarding the affairs of Mexico.

If apology were needed for thus addressing myself to the commercial men of Great Britain, I seem to have ample justification, for Englishmen have been unusually keen in obtaining concessions and in the forming of joint-stock companies. During the last few years they have been actively engaged in "bullying" and "bearing"—in the buying and selling of shares in companies having interests in various parts of the world. So little has been known about Mexico and the Mexicans, either through visiting the country, or by direct trade therewith, that I

have felt it somewhat incumbent upon me, as well in the interests of my fellow-countrymen, as in the interests of the general body of traders and manufacturers who may be on the look out for fresh fields for commercial enterprise, to devote myself to the work now before the reader. With eleven years' personal experience in foreign travel, and of the trade and manufactures of Europe and the United States, I have been naturally interested in the study of so important a field for new enterprises as this presented. I was fortunate, before undertaking my last visit to Mexico, to obtain letters of introduction (through the influence of the London Chamber of Commerce) from H.B.M. Foreign Office. Through these letters I was placed in an excellent position for obtaining much valuable information, and of studying somewhat critically the conditions of Mexico as a possible field for British trade.

Unfortunately, the statistics, taken from different sources, do not always agree, but I have done my best to reconcile them where necessary, and to give them in as correct a form as possible. In fulfilling what would otherwise have been a difficult task, I feel it to be my pleasing duty to state that I have been greatly aided by the excellent published reports of Mr. Consul Carden, of the City of Mexico, of whose valuable statistics I have made free use.

I have of course been enabled, by personal observation, to see much for myself and have obtained much valuable information from many well informed friends in Mexico,

for which I desire to offer my grateful thanks; especially should I mention that given me by Senor Lynch-Zaldivar.

I have also to thank Senor Don Genaro Raigosa, the Mexican Financial Agent in London, for his courtesy in reading the proof sheets of that portion which more immediately bears upon the Trade and Finance of his country.

I have also taken advantage of the large mass of data carefully collected at considerable expense by the Bureau of the American Republics, Washington, U.S.A., in connection with this and other Southern Republics. To this source I am indebted almost entirely for the chapter on Mexican industries, as well as others in the Appendix. With me the difficulty has been, in dealing with so great a mass of detail, oral and written, to condense such into a readable form, so as to spare the reader the infliction of what might in all probability be found to be an uninteresting and unsatisfactory volume.

My thanks are also due to friends who have travelled in Mexico, and to Representatives of important Mexican Corporations in London, who have given me many suggested additions, facts, opinions, and criticisms, which have been of considerable value to me.

I am further indebted for aid and counsel to my friend Geo. Edwin Swithinbank, Esq., LL.D., and for his assistance in reading over the manuscript, and in carefully revising the proofs as they have come from the printers' hands.

I have, nevertheless, reason to fear, that, notwithstanding all the valuable assistance thus rendered to me by so large a body of friends, I have fallen into not a few errors. Without asking to be excused, I desire to plead, in extenuation, that the book has been written under constant pressure of business, and other important duties.

My reasons for this self-imposed task will be made clear by the book itself. I am now content to send it out into the world upon its own merits, trusting that the motives which prompted its publication may atone for its many imperfections.

E. J. H.

KINGSTON HOUSE,

CATERHAM VALLEY,

Feb. 15th, 1892.

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MEXICO:
ITS
PROGRESS
AND
COMMERCIAL POSSIBILITIES.

MEXICO:

Its Progress and Commercial Possibilities.

CHAPTER I.

OLD MEXICO AND THE MEXICO OF TO-DAY.

The commercial possibilities of Mexico present at this time a much more interesting subject for consideration in consequence of the recent troubles in South America, to which the attention of the whole civilised world has been called.

There is no part of the ancient Spanish Atlantic Empire of greater importance than Mexico. Although this country has been in commercial relationship with Europe for over 350 years, still less is really known of Mexico to-day, than of almost any other civilised country on the face of the globe.

Older than Egypt, the ancient history of Mexico is prolific with legend and romance. The evidences of past civilisation are so abundant, that it is almost impossible to find any spot in the country where there are no relics of Ancient Mexico. The ruins of its Toltec, Aztec and Spanish inhabitants are rich fields for antiquarian and scientific research.

Mexico contains important and populous cities, with all the modern advantages of electric light, tram cars, and other evidences of civilisation, yet none the less are there

in Southern Mexico, and on the Pacific Coast, hundreds of square miles of unexplored country, the only inhabitants of which are semi-barbarous Indians.

So many reports, at variance with each other, have reached us regarding Mexico and the Mexicans, that special care is rendered necessary in the preparation of a comprehensive study and report of Mexico as a field for British enterprise. The conditions of the cities are so different from the more remote country districts, that what may be true of one part of the country is totally untrue regarding another. The difficulty is again increased on account of the heterogeneous conditions of its people. One has always to discriminate carefully between the various classes, for whilst one has no difficulty in finding that there are in Mexico some who are undoubtedly the degenerate descendants of a most degenerate race, yet it is easy to discover that, instead of the treacherous, cunning, and indolent Mexican of whom we have heard, there are many others of enlightenment, energy, and intelligence, possessing the elements of a good and improving people.

It is the constant experience of those who have known the Mexicans the longest, to hear the highest praise and most satisfactory experience concerning them.

Then, again, I should mention that the general opinion entertained abroad of the richness and fertility of the country, applies too frequently to-day to a country sometimes almost barren, for want of proper cultivation, and more often from the want of roads, water, machinery, and public enterprise. These are the difficulties standing in the way of our presenting the subject correctly, but, as I shall endeavour to prove, these very adverse conditions form so many reasons why we in England should be made acquainted with the actual position of the Mexico

of to-day, in order that we may be rightly guided in the investment of capital and in the prudent prosecution of our business enterprises.

The geographical position of Mexico seems so little comprehended by the commercial man of ordinary education, and so little has been heard about Mexico, that I am obliged to state that Mexico is entirely different in its conditions from either Central or South America; neither resembling the Central American States in sluggish stagnation, nor the Southern Republics in perpetual restlessness. It is certain, however, that it has greater advantages than either, and that it is not likely to follow their example, either in financial or in revolutionary troubles. The liberal policy adopted since the overthrow of the empire has removed Mexico from such possibilities, and what preceded that time may be relegated to ancient history.

The Mexico of to-day represents a country with an inexhaustible store of mineral and agricultural wealth, with vast areas of fertile lands, and of forests of rich woods which have yet to be developed. Following the laws of vacuum, capital and enterprise in the near future will flow in, and open up a country where development is so much needed, and Mexico will become once more famous. Progress and enlightenment have already been substituted for intolerance and ignorance; freedom of religion, free schools, and higher branches of education have taken the place of wrong and oppression; brigandage has been in a great degree suppressed, an extensive railway system constructed, postage cost has been reduced, and post office facilities extended. The civil and military law codes have been revised and reformed, and the payment of interest on the National Debt renewed; general peace at home has been maintained, and commercial

affairs have been developed with a steady and increasing growth, and all this under difficulties which, when viewed abstractedly and collectively by a foreign observer, seem to have been appalling and insurmountable. Mexico has been so long obscured, whilst its resources have been so rich, that it will not be surprising to find it preparing for one of those sudden leaps into prosperity which we have found happening to young nations in the New World at certain periods of their existence.



CHAPTER II.

CLIMATE AND ALTITUDE.

The climate of Mexico embraces every variety, from the temperate to the tropical, for, as a writer in "The Story of Nations" has well said, "Mexico, with the exception of the narrow border of sea coast, is a lofty table-land between two oceans, a mountain ridge continued up from the Andes in South America, contracted at the Isthmus of Panama to a narrow chain of granite, to grow broad in Mexico as it stretches to the north-west, until it spreads at an elevation from 4,000 to 8,000 feet, almost from ocean to gulf. This is Anahuac, the so-called table land of Mexico, a broad plateau upon which the picturesque romantic drama of Mexican history has been played. Upon this high plateau, which is by no means level, rise the crests of the great volcanic ridges. The table land rolls off northward at first, keeping its high level, growing narrower, gradually sinking as it approaches the Rio Grande, until at the boundary line of the United States it has fallen to 3,000 feet.

"Thus Mexico possesses three well-defined climates, due to variation in altitude: the *tierra caliente*, or hot lands of the coast; the *tierra templada*, or temperate region; and the *tierra fria*, the cold regions of the mountain tops, more than 6,000 feet above the level of the sea. These climates, moreover, are modified by the latitude, so that between the cold altitudes of the northern portions and the warm tropical levels of the south, there is a vast range of atmospherical change.

“ In the tierra templada the year is divided into two seasons: the dry season, from November to May; the rainy one, from June to October. The pleasanter one is the rainy one, in spite of its name. The rains are not continuous, but fall usually late in the afternoon and during the night, leaving the morning bright and clear, and the air deliciously fresh and cool. All the year roses bloom in the City of Mexico, and there are places where you may eat strawberries every day in the three hundred and sixty-five.

“ Spreading over the greater part of this lofty region, there are broad level plains of rich verdure, bright with all imaginable wild flowers growing in profusion; large lakes as picturesque as those of Northern Italy, surrounded by hills that are mountains, reckoning from the sea level; lofty mountain peaks, eternally snow-covered, barren and rocky below their summits, then clothed with pine, and nearer at hand with fine oaks and other trees of temperate climates. Brawling streams water the valleys, and at the edge of the plateau make deep barrancas whose depths reach to the lower level, their dangerous chasms hidden by rich growths.”

It is hardly possible to speak too strongly of the exquisite climate of the Mexican plateau, over-arched as it is by the loveliest of Italian skies day by day, month by month; and though the temperature runs high occasionally during the day, still, so dry is the air, that one seldom feels oppressed by the heat, while during the mornings and evenings it is a delight to breathe.

THE CITY OF MEXICO.

On the plateaux is situated the City of Mexico, at an altitude of 7,000 feet above sea level. It lies in an oval-

shaped valley about 31 by 45 miles in diameter, and is wholly enclosed by a wall of mountains, 200 miles in circumference.

The climate of the city would be almost perfect, except for the fact that out of the six lakes surrounding it, and spreading over the valley, five are above the level of the city. As a consequence, the soil and substrata become so saturated with water, that drainage is almost impossible, and as the sewers are choked with the filth of centuries, fevers and malaria are prevalent. The Government has, however, contracted with an English firm for an improved system of drainage which promises, upon completion, to produce great improvements in the hygienic conditions of the city. It is certain that but for the rarity and dryness of the atmosphere, and consequent rapid evaporation, the city would, under the present conditions of defective drainage, soon be visited by a desolating pestilence.



CHAPTER III.

THE GOVERNMENT.

Mexico is divided into 27 States, with two Territories and a Federal District, each of which manages its own local affairs and are bound together into body politic, and protected by fundamental and constitutional laws.

The present Executive Government of Mexico seems to be cultivating and encouraging every effort that may serve to strengthen society against any possibility of an ultra-Conservative reaction. At considerable risk and cost to itself, it has proclaimed the great principle of freedom of worship, and now offers protection and encouragement to the various Protestant sects, in order that the Catholic Church may be kept in check. This is a boon yet hardly understood or appreciated. Intolerance and persecution of the worst kind existed but a short while ago—now all Protestant sects are welcome, and this fact should appeal most strongly to the minds of all who are interested in the spread of the Gospel amongst a people giving evident proof of a desire for that culture and enlightenment so characteristic of other commercial nations. I venture to assert that this fact is not sufficiently well known; the English Church in the City of Mexico seems to possess no real life—abundant opportunities for doing good lie about in every direction, but are unheeded; there is a fruitful field at hand for an active Protestant organisation, but no one with strength and vigour is at hand to enter upon the work.

I have received a letter from an impartial and reliable friend, an old resident in the City of Mexico, under

date of September 22nd, 1891, in which he writes as follows:—"I have never before during my 32 years of residence in this country, seen the Anniversary of the Declaration of Mexican Independence so enthusiastically celebrated. There have been a series of the most varied rounds of festivals; grand military parades, reviews, dozens of ceremonial meetings, balls, races, hundreds of picnics, lake regattas, with an enormous invasion of a throng of over 150,000 people, composed of foreign tourists, visitors from all the different Mexican States, official committees from the principal cities and towns of the Republic, in charge of congratulatory missions etc. The whole must have impressed the foreign spectators with the idea that the Mexican people during the last seven or eight days were the prey of an excess of joyful delirium, and that a country which devotes itself with such a warm activity to a period of incessant pleasures and dissipation must be the happiest on the surface of the earth. This time I have been convinced that General Porfirio Diaz is really just now the idol of the Mexican people; and that as long as he lives, sure progress and improvement will continue."

The popularity of the present Government is beyond question, and I can most emphatically state, after making every possible enquiry on the spot from those who are in a position to know, that there is absolutely nothing but peace in the country, and this will last as long as the President, Don Porfirio Diaz, lives, and probably longer.

No class of the Mexican population, from the poorest Indian to the most important capitalist, wishes for anything but public order, peaceful business, and, consequently, the opportunity for devotion to pleasure and public amusement.

It is deeply to be regretted that for some purpose or

other a large number of false reports have been circulated, originating in some of the principal American cities, respecting the political and financial affairs of the country. These manufactured reports of revolutionary troubles, etc., are cabled over the whole world, only to be contradicted twenty-four hours later.

THE PRESIDENT.

President Diaz has outlived his most serious opponents, who were the old Conservative party, dominated by the Church, and his firm and equitable rule has created a condition of stability difficult to be realised without a knowledge of the detailed conditions.

General Diaz is now 61 years of age, but, through his methodical habits of life and work, he is a model of physical strength, and consequently it may be reasonably hoped that his valuable services may be continued to his country for many years to come. He governs the Republic in a way which might not be considered to be in strict accord with those humanitarian principles that are understood to govern the acts of our more civilised of European rulers; but, having regard to the heterogeneous character of the people, no one can say that the rule of General Diaz has been other than satisfactory to the nation as a whole, for prosperity, peace, and the national well-being have, to a certain extent, been the happy result, and a strict and honest administration of public moneys has been secured.

Although his elevation to power was effected in the first instance through military influence, and by the arbitrary and violent overthrow of the regularly-constituted authorities, still, he has undoubtedly the interests of the country supremely at heart. He is liberal and progressive, and is doing his best to rule with wisdom and in strict justice. He lends a willing ear to those who may

chance to suffer injustice, and devotes himself to the work of righting the wrongs which are constantly coming before his notice.

General Diaz is undoubtedly one of the ablest men who has ever filled the position of President, and all those interested in the country look to his continuation in office as the most effectual guarantee for the continuance of the present prosperous conditions.

MINISTERS.

The President also is appointing men of high character and exceptional ability to the higher offices of State, and loses no opportunity of making wise and radical changes in cases where such seem to be necessary. The present Minister for the Interior, Senor Don Manuel Romero Rubio, and Senor Don Ignacio Mariscal, Minister of Foreign Affairs (the latter having once served as Minister to England), are men of great ability—polished statesmen, and whose patriotism is undoubted.

The appointment of Senor Don Benito Farias in the place of the late Finance Minister, Dublan, is another instance of the President's wise selection. As Secretary of the Treasury, the varied experience of Senor Don Benito Farias in financial matters, gained whilst serving the Republic as its Financial Agent in London, marks him as a fit successor to the late Minister Dublan. During the short time he has been in office the good opinion entertained of him, and of his ability as a financier, has been fully confirmed. Under him there are already evidences of the resources of the country being developed on a steady and solid basis, and the last advices I have received say that the finances of the country are progressing favourably, and that the administration proceeds in its respective departments in perfect harmony.

ARMY AND POLICE.

As the stability of a Government depends very much upon the strength and efficency of its Army, and upon its being able to maintain peace and tranquillity in the most critical of times, I cannot but think that the Government of Mexico has secured its permanent stability by having well under control all the military force necessary to secure this. Mexico possesses an army of about 45,000 men, or nearly double that of the United States of America. They are well disciplined and equipped, and some of them are splendidly horsed. Their officers are educated at the National Military School at Chapultepec, which is modelled after the United States Military School at West Point, in New York State, and is in the highest state of efficiency.

The Police in Mexico generally are well trained and courteous, and in the City of Mexico itself are found at every street corner. At night they are each furnished with a lantern, so that there is no difficulty in knowing where the Police are to be found, at any time their services may be required.

The "Rurales," or Country Mounted Police, are all well armed and splendidly horsed. I was present at a review of 10,000 of these men, in the City of Mexico, on the national fête day, the celebration of the Mexican victory over the French, at Puebla, May 5th, and I can testify to their splendid appearance and discipline.

THE MASSES.

The great mass of the people engaged in agriculture and manual labour take no interest in politics, and in the general elections, I am told, not more than 30 per cent. of the population ever take the trouble to vote. The better classes, and those enjoying the advantages of the long and steady growing prosperity and development of the

country, are naturally in favour of a Government under whose liberal *régime* they have enjoyed fourteen years of prosperity.

PUBLIC SAFETY.

We have the report of Consul Carden on public order, and in this he states as follows:—"The immense majority of offences are directly traceable to drunkenness, which, owing to the cheapness of the national drink 'Pulque,' is very prevalent. Other offences are comparatively rare, and there are few cities of the same size where life and property are more secure, or where respectable persons, especially foreigners, can walk about the streets at all hours of the day and night with less chances of being molested." From my own experience and observation, I can certainly confirm this, and on my return to the Western States of America I was much struck with the contrast, and with the large number of murders and the larger number of robberies there so constantly occurring, and where the only difficulty seemed to be in getting a conviction even in cases clearly and explicitly proved.



CHAPTER IV.

POPULATION.

An important element in the development of the country is undoubtedly its population. According to the Census of 1886, it has 12,000,000 inhabitants, consisting of—

- 4,500,000 Aboriginal Indians.
- 6,000,000 Mestizos, or Mixed Races.
- 1,500,000 Europeans and Creoles.

Thus one-third of the population consists of pure Indians, or aborigines of the soil; one-half are Mestizos, or mixed people, which are really to-day the dominant race of Mexico; and the remaining one-sixth are Europeans by birth, or their immediate descendants; the Spanish element, however, predominating. This million and a half of Europeans, or Creoles, were at one time the gentry or aristocracy of Mexico, and have still their aspirations in this direction. Whatever may be said to the contrary, they have many very pleasing traits. Their goodness of heart, genial cheerfulness, and the frankness with which strangers are received by them, and the respect and courtesy paid by children to parents, is all very pleasing to travellers in Mexico.

Concerning the one-third portion, the four and a half millions of aborigines. The Indians are a sort of hand-to-mouth, patient, dumb, dispirited people, thinly clad, poorly fed, and easily governed. They are kindly in their manners, and courteous in their deportment; in some matters scrupulously clean and tidy, and in others, particularly in sanitation, wretchedly negligent and ignorant.

The conditions of their living are so simple, and their lives so ambitionless, that they make all ends meet without any great muscular effort. They congregate as much as possible in the towns and in the City of Mexico, where they form villages and settlements by themselves, apart from the Whites, and interfere with none of the affairs of the upper classes. One interesting feature in the lives of those who are not attached to any of the great estates, is that they are eminently communistic. They cultivate their lands in common, and divide the proceeds according to the laws which ante-date the Spanish Conquest. They are used much as porters, and bearers of heavy burdens. They carry on a few branches of industry, and are very intelligent, and form the "Peons," or labouring classes of Mexico. Unfortunately, these peons are almost in a condition of slavery, from the fact that they are generally in debt to their masters, and for that reason are unable to migrate, especially as they have a peculiar attachment to the place of their nativity, and to the great estates of the country in which their peonage has existed.

The Indian, however, is content with the little he gets, is easily managed, obedient, and, I think, capable of developing, by education and better feeding, traits for the general good of the country.

The Mestizos, which form the largest proportion of the population of Mexico, are, as their name indicates, a mixed race. They vary in intelligence and usefulness according to the admixture of white blood ; they are valuable as domestic servants, as they are intelligent and faithful, and have a great regard for their masters and mistresses. They are a gentle, docile race, loving pleasure, not always avoiding labour, cleanly in habit, and perfectly honest. They are found as "Rancheros," or small farmers, as labourers and soldiers, and are often met with in

the higher circles, and are classed as among some of the handsomest of the Mexican people.

There are, however, a proportion of Mestizos called Leperos, who seem to be amongst the lowest and vilest specimens of humanity in existence. These live by stealing, begging, or even worse than that; they nearly all carry firearms, and know perfectly well how to use them. They are careless of life, whether of their own, or others, and when developed into highwaymen or confirmed criminals, the present Government treat them to summary justice, and take every opportunity of exterminating any suspected of serious crime or murder. This summary mode of dealing with criminals in Mexico is a necessity. The orderly condition of Great Britain in the present day was not arrived at without the wholesale executions which occurred in the time of Henry VIII. and his successors. It takes but a short residence in Mexico to recognise the wisdom of this apparent severity in dealing with criminals.

Where the infusion of White blood has been greater, and the parentage more satisfactory, the Mestizos are often men of considerable ability, and distinguish themselves in the professions of arms and laws. As they are not without ambition, and as the younger generations are becoming educated, they are gradually assimilated with the White-races. It is said that the Mestizos of the third generation cannot be distinguished from the Creoles themselves, and as they seem peculiarly fitted for holding political offices, they are a good race foundation upon which to build the improved and enlightened Mexican of the future.

CHAPTER V.

LANGUAGE AND EDUCATION.

The natural language is Spanish, although both French and German are constantly spoken. Owing to the small number of English-speaking people in the country, English is not much used, although there is a general desire amongst the natives to acquire it.

The most hopeful and encouraging augury for the future of Mexico is, that the present Government recognises the necessity of educating the masses of the people, and are doing the best that can be done under the existing circumstances in that direction. During the last ten years education has made great advances. In all of the important centres of population, free schools have been established, which are now relieved from Church supremacy and are under the auspices of the National Government; indeed, a law has been passed rendering primary instruction compulsory. Infant schools have been established in which the teaching is of an essentially educational character. Higher education is carried on in secondary schools and seminaries, and in colleges for professional instruction, including schools of law, medicine, engineering, mining, fine arts and music, and one military and two naval colleges. The number attending these higher schools is stated at 21,000.

Mexico has done better for her sons in respect to education than foreigners generally give her credit for. In addition to the above, industrial schools have been estab-

lished for some years, in which the arts of spinning, weaving, printing, carpentering, leather work, and other handicrafts are taught to the Indian children, who are apt pupils and are likely to show important results of their education in the next generation. The Department of Public Works has also established a school of agriculture, for instruction in the best and most improved methods of cultivating the soil, and also offers every encouragement to farmers for procuring the best breed of cattle, etc.

In 1888 there were 10,726 primary schools and 543,977 pupils. The entire sum spent on education is given at 3,512,000 dols., of which 802,000 dols. is contributed by the Federal, and 1,012,000 dols. by the municipality of Mexico, and 2,500,000 dols. by the State Government and municipalities.

Following out the humanitarian principles of the Government, encouragement is now given to the establishment of asylums and other charitable institutions, notably for the blind, deaf, and dumb.

I was particularly struck with the admirable manner in which the masses of the population are provided with facilities for enjoyment. Every opportunity is taken to beautify open spaces with flowers and foliage. Roses, and a profusion of semi-tropical flowering shrubs, abound there, and the public gardens are carefully kept and thoroughly appreciated. In the City of Mexico, and in very many towns and villages, military bands play under the shade of trees on Sundays and other days. This gift of the Government to the people is an incalculable boon to all classes, but enjoyed by none more than the Indians, who seem the most attentive listeners, and who never leave the immediate proximity of the band-stand until the music has ceased. The bands are excellent, have

white leaders, although the sweetest players are understood to be Indians.

There is no lack of public libraries, some twenty contain (in all) 250,000 volumes, and there are several private libraries containing from 1,000 to 10,000 volumes each. There are also about 300 newspapers, magazines, or pamphlets, of which about 100 are published in the City of Mexico alone.



CHAPTER VI.

AGRICULTURAL PRODUCTS.

If the country were properly cultivated, its products would constitute an element of enormous wealth, and be capable of supporting a large population. So richly is it endowed with natural advantages, that it is a land where none ought to be poor, and where misery should be unknown.

The richest people to-day in Mexico are the agriculturists. Rich as are its minerals, the undeveloped agricultural wealth of the country is even greater. With its magnificent lands and varieties of climate, from perpetual snow to tropical heat, there is hardly a fruit in the known world, or a variety of plant, shrub, or tree, indigenous to both habitable zones, that would not find a congenial home in Mexico.

With an estimated area of 741,791 square miles, larger than the combined areas of Great Britain, Germany, France, Belgium, Spain, and Greece, its development cannot proceed very rapidly with the population as at present constituted.

Consul Carden, in his annual report, No. 637, 1890, to the Foreign Office, says: "Mexico, it is well known, contains as fine an agricultural land as there is in the world, the soil being capable of producing every variety of cereal and fruit. In most parts of the Republic two crops are grown annually, and that with the aid of the rudest and most primitive implements of husbandry,

and without any help of artificial dressing of the ground," etc.

The one great need is water. The native Indians once possessed extensive irrigation works, but they were destroyed by the Spaniards, who, as well, denuded the hills and high valleys of the plateaux of their forest coverings. With a network of irrigating arteries, and rebuilding of the ancient aquias or canals, together with the sinking of artesian wells, vast deserted tracks of land, whose only want is water, would again become fertile, and be clothed with verdure.

The experiences of successful land reclamations by irrigation in California and the arid districts of Western America, abundantly prove the feasibility of doing the same thing in Mexico, where the climate, soil, and general conditions are equal, if not superior, to those of America. The original price of the land and conditions for acquiring it, together with the special advantages given by the Government in the shape of immunity from taxation, for a specified period, etc., are important points for consideration when the question of colonisation comes to be considered.

Fortunately Mexico has not yet become afflicted with the land fever which so constantly springs up and flourishes in America, almost contemporaneously with the opening of Railways. There is in Mexico an abundance of fine agricultural land, with equally as good soil and climate as the most favoured parts of California, and which may be bought to-day at almost nominal prices, no effort being made is to provide anything in the way of a crop except to meet the simplest wants of the producers. The land is tilled with the rudest implements, of a fashion almost prehistoric. The plough is generally a crooked stick, with sometimes an iron point; the sickle being

used with saw teeth, instead of an edge, etc. The present want of skilled mechanics is a great drawback to the introduction of improved machinery in Mexico. But on some of the great haciendas, American and English machinery has been successfully introduced. The Mexican authorities are fully aware of the advantages which America has derived from immigration and colonisation, and are to-day most liberal in granting concessions to *bonâ fide* enterprises.

The Government has already given many grants of land to foreign companies of over 1,000,000 acres. These enterprises have frequently not been successful; sometimes from want of sufficient capital to develop such large tracts, but more frequently from the fact that ranching carried on by distant boards of directors is hardly ever made to pay. It is the fault of the system and not of the enterprise.

With a more perfect system of farming in Mexico, upon the same lines as those of the great prairie farms of North-West Canada, an almost fabulous amount of produce could be raised. As, however, almost all the first necessities of European life and farming have first to be brought into the country, such enterprises can only be commenced with a due regard to the means of communication—railways, irrigation facilities, and climatic influences, all, have to be taken into consideration.

Hitherto, the tide of immigration has not set towards Mexico, and the few who have gone there have generally settled in large towns. In order, however, to make the land fruitful, colonists are, perhaps, to-day, Mexico's greatest need.

With the influx of foreign immigration, fresh land values will be fixed, bringing new ambitions and a new era to the people, and when the produce of the country

shall have become sufficiently abundant, the fame of this Egypt of the New World will rival that of either Florida or California for its agricultural riches.

The *Statesman's Year Book* gives the agricultural produce for the year 1888 thus:—

Maize...	...	...	46,458,810	hetrolitres.
Barley	...	...	2,095,660	"
Wheat crop is of average value of \$10,857,000				
Sugar-cane	"	"	8,735,000	
Henequen	"	"	3,718,750	
Coffee	"	"	4,200,000	
Tobacco	"	"	2,500,000	

Large numbers of cattle are reared for the United States of America, and in 1883, in Northern Mexico alone, on an area of 300,000 square miles, there were then existing—

Cattle	...	...	...	...	1,500,000
Goats	...	...	...	...	2,500,000
Horses	...	...	...	...	1,000,000
Sheep	...	...	...	...	1,000,000

In the whole of Mexico, in 1883, there were 20,574 cattle ranches valued at £100,000,000.

COFFEE.

If there is one product for which Mexico offers the best conditions for its perfect growth, in the matter of soil, climate, and altitude, it is coffee. Experience has proved that the best flavoured and heaviest coffee is produced by these conditions, together with a proper cultivation and preparation (or curing) for the market.

All the coast States of Southern Mexico, of both the Gulf and the Pacific Coast, have excellent soil and climate for the growing of coffee. Coffee is raised principally in

the States of Chiapas, Vera Cruz, Morelos, Oaxaca, Michoacan, and Colima, and can be grown in several others, while portions of Colima, Michoacan, and Chiapas have perhaps the best conditions for successful culture. The coffee of Uruapam (Michoacan) is celebrated, and is considered by connoisseurs to be finer than Brazilian coffee. The exports to the United States of this bean, during the fiscal year of 1887-88 amounted to \$2,117,299. The total exports for the year 1888-89 were valued at \$3,886,034.

The rapid growth of the industry may be seen by noting the exports of the last few years :—

1887-8	...	...	\$2,431,025
1888-9	...	...	3,886,034
1889-90	...	...	4,811,000
1890-1	...	...	6,149,808

Of this last amount the United States took \$3,542,851, whilst a very small amount was sent to England. The enormous increase in production during the last ten years indicates a corresponding growth of prosperity, as, whilst the expenses of cultivation are small, the profits are large.

The price of land suitable for coffee plantations is low, and may be purchased over a large area. The prices for suitable first-class land are :—

The State of Vera Cruz	...	\$1.13	per acre.
” ” Colima	...	0.90	” ”
” ” Michoacan	...	0.90	” ”
” ” Chiapas	...	0.62	” ”
” ” Oaxaca	...	0.44	” ”

Two companies, one English and one American, have lately been established to cultivate coffee in the State of Oaxaca..

In Chiapas the landed proprietors are increasing

their coffee plantations, and have organised an association for protecting this industry.

In the district of Soconusco in this State, there are now 26 Coffee plantations, which employ 1,520 men. The owner of one of these plantations states that there are sufficient coffee lands in that district still unoccupied to produce at least 200,000 quintals of 100 lb. each of the berry.

The cost of growing would not exceed \$5 per quintal, or 5 cents per lb. packed in sacks and ready for transportation, and as it finds a quick sale at the plantation at 20 cents, there is a profit of 15 cents per lb. at present in this industry.

The coffee tree begins to yield the third year, but is not generally in full bearing until the fifth. The cost of the early cultivation is often covered by planting bananas between the rows, which forms a shelter for the young trees during their growth, and more than covers all the expenses of the plantation, as this fruit commences to yield the first year after planting.

Concerning coffee culture in Mexico, the following data is taken from a book entitled "Coffee Culture on the Southern Coast of the State of Chiapas," published by Senor Don Matias Romero, in the City of Mexico, August 1875: "The cost of each coffee tree, four years after planting, including value of public land and wages, at the rate paid then in Soconusco is about 11 cents per tree. The yield of each tree in its fourth year is two pounds of coffee, which, at the minimum price of 10 cents per pound, is 20 cents; expenses of gathering the coffee beans and other expenses until the coffee is delivered to the market, 5 cents per tree. Net profit 15 cents per tree."

Coffee husbandry will therefore form one of the most remunerative of Mexico's agricultural products, as there is

a vast area especially adapted to its culture lying adjacent to ports, from which shipments can be conveniently made to Europe.

TOBACCO.

The cultivation of the tobacco plant has greatly increased of late years, and if more care were exercised both in its growth and manufacture, Mexican tobacco would be equal to the finest quality grown in Havannah.

It is chiefly grown in the States of Vera Cruz, Tabasco, Campeche, Yucatan, Oaxaca, Chiapas, and Jalisco. The annual tobacco crop averages a value of \$2,500,000, Vera Cruz alone yearly raising about 5,000 tons.

England takes £101,000 worth out of a total of £140,000 worth annually exported.

The United States imported from Mexico during the fiscal year 1889-90 leaf tobacco to the value of \$15,807, and manufactured tobacco to the value of \$16,851. The exportation for 1890-91 reached \$1,105,176, compared with \$948,332 for 1889-90.

Consul Carden, in a special report (No. 138) upon the cultivation and manufacture of tobacco in the State of Vera Cruz, considers it well worthy of the attention of English investors. He states:—"There can be no doubt that the present export of tobacco is only a preliminary to a very extensive foreign trade in that article, and that Vera Cruz will soon be a serious rival to Havannah, and especially will this be the case when consumers learn the fact that moderate-priced Vera Cruz cigars are superior to moderate-priced Havannahs. This district, with its climate and soil so suitable to the tobacco plant, presents a wide field for the employment of British capital as tobacco planting," etc., etc.

In this report he gives careful and detailed information which is most valuable to those interested in the business.

At present the mode of cultivation is primitive, like everything else in Mexico. The land is made to raise each year for eight years running, not only two crops of tobacco annually, but one of maize, and one of black beans; in all, four crops per annum, without more fertilising than the burnt weeds. Under such conditions, and with land and labour cheap, tobacco planting is a profitable industry. Unfortunately, at present, little care is too often bestowed in sorting the leaves, causing much inequality in the colour and appearance of the cigar. This defect is now however, being remedied by some makers who have taken to grow their own tobacco.

HENEQUEN.

“*Agave Sisalensis*,” or Sisal hemp, is indigenous to Yucatan, but flourishes in the most arid soils, and springs up in almost any place where it can find soil enough in which to take root.

The plants require no attention, except to be kept free from weeds, and yield fibre in five years, continuing to bear the leaves from which the fibre is made for a period of fifteen to twenty years. Therefore, considering the abundance of plants growing wild, and the ease and small expense with which their cultivation is continued, this industry gives a large return for a small outlay. Many owners of extensive desert tracts, by the planting of Henequen, have become wealthy in the course of a few years.

As Henequen growing has only been undertaken within the last twenty years, it will be seen to what proportions this industry has already risen. It is still rapidly increasing and there is in it an abundant opportunity for capitalists, for from the Henequen fibre are manufactured numberless articles, and the plant has almost as many

uses in Mexico as the palm, but not quite so many as its sister plant the Maguey.

OTHER FIBRE PLANTS.

In addition to Henequen, there is a great profusion in nearly every part of the Republic, of other Fibre plants; indeed Mexico has been called "The Land of Fibre."

Principal among them are the Agave, already mentioned, the Banana tree, Ramie, and several kinds of cacti; from one variety, which is called the "Cirio," a good quality of paper is manufactured; it grows abundantly in the territory of Lower California, and we have the President's recent statement to an Englishman as reported in the *Financial Times* of October 29th, 1891, that there are mountains entirely covered with a fibrous plant called "Pita," which grows in such profusion in the States of Oaxaca and Chiapas, that were a short railway built to that district it could not exhaust the supply for 30 or 40 years. This fibre is as fine as silk, and as strong as hemp.

There is also an extensive field for the cultivation of Ramie. The late General Don Carlos Pacheco, having formed a company styled "The Compania Mexicana Agricola é Industrial del Ramie" carried on exhaustive experiments at the Hacienda de Motzorongo with this valuable fibre. From these experiments it has been found that it required an entirely different soil from Henequen, and grows with good results in 22 States of the Republic, and in some regions this company states that it yields as much as six crops per year. Notwithstanding the fact that the results of the decortication of the fibre were excellent, while the Ramie was worked in experimental quantities, yet when the production of fibre was proceeded with on a large scale, the success of the machinery used by the company was not so good, and from latest advices this magnificent

enterprise is just now at a standstill, although from the continual efforts made in the United States for the perfection of decorticating machinery, it is only a question of time before complete success in the decortication of Ramie will be arrived at.

RUBBER.

Rubber planting is very profitable, and is largely increasing, especially in the States of Chiapas, Oaxaca, Vera Cruz, Tabasco, and Guerrero. In the first-mentioned State, on the Pacific coast, there exist extensive forests of rubber trees, which are only necessary to tap in order to obtain the substance. It is estimated that Mexico could easily produce 10,000 tons per annum, which would command the same price as the best quality of Peru rubber, for the trees are identically the same as those in Brazil. It only requires the same treatment after the gum is extracted to produce an equal quality rubber. The present method of collection is by the Indians, who spoil both the rubber and the trees by their unscientific and wasteful methods. The rubber is cured in a primitive fashion, both the good and poor qualities being mixed together. Labour is abundant and can be readily instructed to collect and cure the rubber to produce better quality, which being done, would largely increase the demand for Mexican rubber.

The Mexican Minister in Washington owns large tracts of land in Chiapas, where he has planted largely, and obtains a considerable and steady revenue from his estates.

It is a tree which gives little or no trouble in cultivation, requiring no preparation of the land, as it seems to prefer poor and arid soil. In fact, it yields a finer quality rubber if it is planted under such conditions.

The cost is about £9 to £10 to plant an acre with 300 trees, which is about the largest number to plant without

overcrowding. The average yield of sap from a tree in four or five years is six lbs., giving a total of 1,800 lbs. to the acre; this would boil down to about 800 lbs. of solid rubber, and when sold would realise about £24, giving, say, £20 net profit to the acre. This profit would gradually increase until the yield would more than double in the eighth and succeeding years.

COCOA.

Cocoa-planting is one of the oldest industries of Mexico, for the cocoa palm, known botanically as *cacao theobroma*, is indigenous, and was largely cultivated by the Aztecs. It is a source of considerable revenue to Mexico, for like most other agricultural industries in the country, where labour and land are so cheap, the cost of growing is proportionately low. Over 400 trees can be planted to the acre. There is a small return in the third and fourth years, but the yield is large enough in the fifth and sixth to pay all expenses with a little over. In the seventh year the trees are in full bearing, continuing so for 30 years and over. The trees like lemons, bear buds, flowers, and fruit at the same time, so that ripe pods may be collected at any time, but there are periodical harvests depending on the dryness of the weather. Each tree yields about 60 pods which contain from 20 to 30 beans, which should give about 13 to 14 lbs. of cocoa beans, or an aggregate of nearly 7 cwt. per acre, and consequently pays handsomely.

The cocoa bean is chiefly cultivated in the States of Tabasco and Chiapas. The best is grown round the Port of Soconusco, near the Guatemalan frontier, and is considered by connoisseurs to be of the finest quality grown. Its flavour and natural richness commends it to manufacturers in England. Chocolate sells at Soconusco for 20 cents per lb., and an excellent opening is offered for the cultivation of the cocoa tree on a large and systematic scale.

There is regular communication between this district and San Francisco and New York.

ORANGES AND OTHER FRUITS.

The Hot Lands, called the *Tierra Calientes*, are especially rich in fruit-bearing trees, principal among which may be enumerated the orange, lemon, citron, tamarind, guava, plum, plantain, banana, and date palm tree; besides pineapples and melons, and many other tropical fruits which grow wild. Most of these fruits are very profitable for cultivation, owing to the exceptional conditions under which they are produced, and the high prices they bring in the United States, where their consumption is enormous and fetch even higher prices than such fruits bring, and which it is possible to grow in that country. This particularly applies to the lemons and oranges of Mexico, as against those of California and Florida.

It is a well-known fact in orange culture, that the perfect development of the fruit, depends entirely upon certain atmospheric conditions, *i.e.*, freedom from extremes of low temperature, an abundance of sunshine, and an atmosphere containing only a small percentage of humidity, irrespective of soil moisture, with entire freedom from extremely low or high temperature. These conditions are fully met with, together with the character and depth of specially adapted soils, facilities for irrigation, etc., upon the foot hills of the great plateaux, of which there is an extensive area, on both the Atlantic and Pacific sides of the Continent. These regions are generally designated the "Tierra Templada," or moderately warm lands. The States of Sonora, Tamaulipas, Vera Cruz, and Oaxaca offer special advantages for such culture, but at present Sonora is the only recognised State from which citrous fruits are exported although as soon as systematic cultivation shall

have been sufficiently developed in these States, and steamship communication established with European ports, the choice fruits of Mexico will entirely supersede the inferior qualities and limited quantity of fine fruits with which our markets are now supplied. At present fruit coming from the vicinity of Hermosillo, in Sonora, is considered to be some of the finest known, and the shipments of oranges to America from the port of Guaymas is already becoming a considerable trade item.

The State of Sonora in the year 1888 exported 3,000,000 oranges, costing 10 dols. per thousand at the place of production, with an export duty of 25 cents per box. There were shipped in the year 1889 by railway to the United States, through Nogales in this State, 13,190 boxes of oranges, all within five months of the year, at as good prices as those grown in Southern California.

So much has been written about the cultivation of oranges for the guidance of Englishmen wishing to emigrate to California and Florida, that it is unnecessary here to say more than that orange culture has more advantages in Mexico than in America, on account of the exceedingly low first cost of the land and of the cheaper labour than is the case in the former country; the climate, soil, and situation of Mexico being also more suitable for citrous trees than even the most favoured parts of the United States.

The banana, as well as the orange, grows spontaneously and in great abundance, near the Mexican coasts on lands near the sea, at an elevation of from 1,900 to 2,000 feet. Great plantations of banana trees can be laid out at a cost of 5 cents per plant, which includes every expense up to the time of bearing fruit. At the end of the first year the plant produces one bunch, which can be sold in the United States from $1\frac{1}{2}$ to $2\frac{1}{2}$ dols. A thousand banana

trees costing 50 dols. will bring at least 1,000 dols. in one year. The following year each plant will produce about double that of the first, and this almost without expense. The yearly exportation of this fruit from the West Indies and Central America already reaches many millions of dollars.

PINEAPPLES.

Pinapple cultivation is also very profitable. It is estimated that $2\frac{1}{2}$ acres planted in pineapples will easily produce 10,000 plants. The crop of corn which is sown among the pineapples will fully meet the expense of the cultivation of the fruit. The 10,000 pineapples will cost absolutely nothing ; the fruit sells at 38 cents per dozen, but exported to the United States they bring six dols. per dozen, netting about 2,000 dols. per acre under cultivation, one man being easily able to cultivate six acres. There are great facilities for the transportation of these fruits, the lines of steamers touching twice a month at the principal ports of the Pacific side, and more frequently at those on the Gulf of Mexico, and carry these products under advantageous freight conditions. In fact, to secure return cargoes the steamers often make considerable reductions in their ordinary freight rates.

SUNDRY PRODUCTS.

Space entirely prevents a comprehensive review of the wonderful variety of fruits and plants which may be grown with little expense in this greatly favoured country. The Hot Lands yield hundreds of varieties of plants, herbs, and roots (useful in medicine and the industries), which grow in great profusion. For example, sarsaparilla, the exports of which to the United States in 1887-8 were valued at 91,000 dols. ; and a great many kinds of mosses and lichens, furnishing excellent dyes, among which is orchil, which

grows in Lower California, and has for many years been an article of large exportation, the Mexican Government deriving large profits therefrom, as there is an export duty upon it of 10 dols. per ton. The exports of orchil for the year ending June, 1888, amounted to 106,290 dols., of which about 25,000 dols. represent the amount shipped to the United States. The vanilla plant grows wild in the Hot Lands, especially in the tropical forests of Vera Cruz and Tobasco.

There are also jalap, rice, arrowroot, beans, indigo, and many other products, which, although not receiving at present much attention, might be made important articles of export. The sugar cane is cultivated extensively, especially in the States of Morelos, Vera Cruz, Jalisco, Oaxaca, Tobasco, Campeche, Guerrero, and Chiapes, as well as in Michoacan and the territory of Lower California. The annual sugar crop averages 8,735,000 dols., but at present the sugar industry is in a very backward state, as, excepting in very few cases, the use of steam and modern machinery for manufacturing it, is almost unknown.

Before closing the list, however, we must not forget to mention the maguey plant, *Agave Americana*, or the century plant of Europe, which grows on the great plains or plateaux, at an elevation of 7,000 feet above the sea. On the vast plains of Apan, about 100 miles from the city, the plants are to be seen as far as the eye can reach, in straight rows, having an open space of three yards between them. A great variety of products are obtained from the root, leaves, and juice. Paper is made from the pulp of the leaves, twine and thread from their fibres, and needles from the sharp tips of their leaves. These leaves also serve as thatching for the housing of the poor. The rare and valuable manuscripts of ancient times, which resembled the papyrus, were made of pulp from the maguey.

Pulque is the fermented juice of the maguey, for which there is an enormous consumption in all parts of the country. A train on the Mexican Railway leaves the plains of Apan every day, laden with nothing but pulque in barrels and skins, producing a revenue to the company of over 1,000 dols from each shipment. The amount of pulque transported upon the Mexican Railroad during the year 1887 was 81,673 tons. In the City of Mexico over 250,000 pints of pulque are daily consumed, and in 1888 there were 822 shops in that city devoted exclusively to its sale. The maguey plantations in the State of Hidalgo are valued at 8,000,000 dols., in Tlaxcalla 4,000,000 dols., and Pueblo 2,000,000 dols.

The Mexican opinion of the national beverage is expressed in the following lines :—

“Sabe que es pulque,
 Licor divino ?
Lo beben los angeles,
 En vez do vino.”

“Know ye not pulque,
 That liquor divine ?
Angels in Heaven
 Prefer it to wine.”

WHEAT AND CORN.

Mexico is becoming a wheat-growing country, and since the increase of transportation facilities offered by the American railroad systems, great impetus has been given to the raising of this grain.

Wheat grows on the plateau of Mexico from 6,000 to 9,000 feet above sea level and between the 18th and 24th parallels of latitude.

The States of Michoacan, Jalisco, Guanajuato, Aguascalientes, San Luis Potosi, and Queretaro are best adapted

for its cultivation, comprising an area of some 52,000 square miles. Wheat could be planted over one-third of this land without serious detriment to the other agricultural interests of the country. The Mexican plan of cultivation makes it possible to obtain three crops every year—one crop of wheat and two crops of corn. The average yield of wheat per acre on irrigated soils is about 20 bushels, and of corn about 50 bushels, and on dry lands about 30. This is considered a fair average yield, and were cultivation carried to its fullest capacity over one-third of the 52,000 square miles of suitable land, the yield would be:—Wheat 110,000,000 bushels and corn 440,000,000 bushels per year, according to an estimate made in 1883. This immense crop would all be available for foreign markets, as the cultivation of outlying lands would provide sufficient for home consumption. Since the date of this estimate, improved machinery and more systematic treatment of the soil have considerably increased the yield of the lands devoted to such cultivation. The following table, taken from a statistical work published by the Mexican Government, gives the yield in bushels of four of such products, in all the States, during the year 1888, which shows that this estimate is not too large, since a great proportion of the above-mentioned area is not sown with wheat or corn:—

STATES & TERRITORIES.	BARLEY. Bushels.	WHEAT. Bushels.	CORN. Bushels.	BEANS. Bushels.
Aguascalientes	137,170	116,313	1,108,143	73,863
Lower California	15,848	28,158	19,045	5,405
Campeche	—	—	155,367	35,092
Coahuila	594,300	366,000	1,615,901	137,255
Colima	—	—	792,400	33,111
Chiapas	—	—	1,733,423	103,210
Chihuahua	121,690	812,210	1,354,438	155,650
Federal District	42,450	73,580	442,329	4,245
Durango	12,253	310,422	2,696,990	160,461
Guanajuato	963,200	1,103,700	13,729,745	668,163

STATES & TERRITORIES.		BARLEY. Bushels.	WHEAT. Bushels.	CORN. Bushels.	BEANS. Bushels.
Guerrero		—	—	2,787,550	253,568
Hidalgo		210,835	169,800	6,737,494	368,154
Jalisco		149,990	2,749,882	18,010,204	876,168
Michoacan		213,948	426,863	10,932,290	558,925
Mexico		849,000	650,900	10,619,518	582,980
Morelos		16,980	3,509	511,409	12,754
Nuevo Leon		22,074	47,119	2,440,705	127,350
Oaxaca		28,300	226,400	10,040,840	554,680
Puebla		948,050	735,800	10,459,680	567,981
Queretaro		551,506	268,850	2,547,000	159,329
San Luis Potosi		149,990	353,750	7,449,607	367,900
Sinaloa		—	77,825	1,334,384	138,670
Sonora		—	115,181	897,817	100,748
Tobasco		—	—	1,554,519	96,814
Tamaulipas		17,149	42,450	2,264,000	133,321
Tlaxcala		792,400	169,800	2,575,300	125,086
Vera Cruz		253,568	27,083	6,142,200	442,895
Yucatan		—	—	776,835	185,987
Zacatecas		341,015	2,320,600	9,749,293	737,215
Total		5,930,716	11,396,195	131,478,425	7,766,980

The method of collecting statistics in Mexico, although somewhat improved of late years, is still quite crude. Were more correct statistics obtainable, it would, without doubt, be found that the above figures fall below the actual production. Mexican wheat is small and hard, and, when properly milled, makes good flour. Specimens of this wheat exhibited at the American Centennial Exhibition in 1876 took the first prize.



CHAPTER VII.

THE PUBLIC LAND SYSTEM AND LAWS.

(From the Bureau of the American Republics.—Bulletin No. 9.)

Land in Mexico may be divided into three regions, which the *Mexican Financial Review* calls respectively the *hacienda* country, the *pueblo* country, and the *free* country.

The first-named comprises the greater part of the central plateau, many of the temperate valleys situated on the slopes or terraces of this plateau, nearly all the Gulf coast, and many points on the Pacific.

The *pueblo* or community holdings lie toward the southern part of the country.

The *free* country or National lands, so called because of the fact that few, if any, *haciendas* or *pueblos* exist there, is situated in the north of the Republic.

As regards the central plateau, it is really marvellous that its lands retain their fertility, considering their great productiveness for hundreds of years. The only way this can be accounted for is, that the system of irrigation there in vogue re-supplies the soil annually with natural fertilising matter. Previous to the Conquest this very land had to provide food for at least twice the existing population of the country, and was producing for more than six centuries unceasingly and without fertilisers. Strange, indeed then, that it has not become sterile. But it is said that the day is fast approaching when the fecundity of this soil will vanish. Dryness and barrenness are already becoming evident in certain portions of the table-lands.

The almost virgin land, and that which invites the energetic attention of the careful husbandman, lies on the east and on the west, towards the coasts. When the railroads now being constructed, shall have united one district with the other, many fertile valleys will be in a position to bring forth two and three crops a year to gladden the eye and fill the purse of the tiller of the soil.

The free or public lands are situated mostly in parts of the States of Chihuahua, Coahuila, Durango, Sinaloa, and Sonora. Immense tracts are here almost uninhabited, and in the western Sierra Madre the plains reach down to the tropics. These lands were formerly settled upon by religious orders, or were held by officers of the Spanish Crown. After the War of Independence, and the escheatting to the State of ecclesiastical holdings, they became public lands, and are what are now called terrenos baldíos. The nation, under a law to that effect enacted, is having these lands surveyed and measured (giving to the companies who survey them one-third of the land surveyed), and is disposing of the rest to private parties and companies. About 100,000,000 acres have thus been disposed of, and the Government still retains somewhere about 25,000,000 acres.

The land in the north is generally laid out in squares, each containing from 4,000 to 6,000 acres.

The climate of this section greatly resembles that of the south of Europe, and is well adapted for colonisation.

The *pueblo* system, it has been said, prevails nearly everywhere in the south of the country, and the Government will require some three or four years more to complete the reclamation of public lands in that quarter, and as the southern railroad system will not be completed before that time, the country must wait some time before the fertile valleys of the States of Chiapas, Guerrero, and Oaxaca can

be opened up to immigration and settlement. Land may, however, be bought there at very low prices, but any organised system of immigration, by which colonists would be compelled to produce and sell quickly, should not for the present be advocated here.

The great question in Mexico is water. The country, excepting the lowlands of the Gulf, is dry, and has been likened to Algeria and Egypt.

The law concerning the occupation of National lands (*terrenos baldíos*) was promulgated on July 22nd, 1863, and, with amendments afterwards enacted, is in substance as follows: All lands in the Republic are considered as National which have not been utilised for public purposes, nor ceded to individuals or corporations authorised to receive them.

Every inhabitant of the Republic has the right to denounce or enter upon public land to the extent of 2,500 hectares (about 6,177 acres), and no more, excepting natives or naturalised citizens of bordering nations, who cannot, except by express authority of the President of the Republic, acquire land in any State or territory bordering on their country situated within 20 leagues of the boundary line, or within 5 leagues of the coast.*

The Government publishes every two years the prices of public lands in every State, district, and territory.

The denouncing of public lands must be made before the judge of the Federal Court in the judicial district wherein the land is situated.

This step taken, the survey and plan of the land denounced will be made by the Government surveyor, or, in default thereof, by a surveyor appointed by the court.

* Aliens desiring to acquire property within the proscribed limits must apply to the Department of Public Works (Fomento), accompanying the application with a report of the Government of the State, district, or territory wherein the land sought to be acquired is situated.

After the survey and plans have been completed, inquiry will be made at the Land Office if the land is in the possession of the Government. Should this be the case, the patent is issued to the denouncer without further proceedings; but in the event of an adverse claim the case between the claimant and denouncer is tried in the courts, the Government also being a party thereto.

In case the Government is not in possession of the land, the denouncement shall be published three times, at intervals of ten days, in the newspapers, and by notices displayed in public places. If no claimant presents himself, no patent shall issue, but a possessory title shall be decreed to vest in the denouncer; but should a claimant intervene, the case shall be tried, with the Government as a party.

A judicial decree granting a patent or possessory title shall not have effect without the approval of the Department of Public Works, to which end the record and copy of the map shall be forwarded to the said Department by the Governor of the State wherein the land in question is situated, accompanied by the report he may deem it advisable to make.

The approval alluded to having been obtained, and the party interested having filed the certificate, and having deposited in the proper office the value of the land, in accordance with the biennial price list, or the requisite instalment when time payments are allowed, the judge will deliver to him the patent or possessory title.

The expenses incident to measurement, survey, or procuring of title, and all other necessary expenses shall be borne by the denouncer, but he is indemnified in case an adverse claimant is successful, against whom costs shall be decreed.

By Act of June 7, 1886, the Government, evidently intending to favour the introduction of foreign capital into Mexico, decreed, among other provisions, that foreigners shall not be required to reside in the Republic for the acquisition of waste or public lands, real estate, and ships, but that they shall be subject to the restrictions imposed by the laws at present in force. The Act further provided that all leases of real estate made to foreigners shall be considered as sales if for a longer period than ten years.

The obligations contracted by an alien acquiring real estate in Mexico are :—

1. To subject himself to the laws of the country in force at the time of acquisition, or which may thereafter be enacted respecting the ownership, transfer, use, and improvement of land, and to submit to the judgment and decrees of Mexican courts in everything affecting the said land.
2. To pay all lawful taxes levied on the property.
3. To aid with his services and means in the preservation of order and security in his place of residence, except in cases of disturbance due to political revolutions, or civil war.
4. To perform the duties of a Mexican citizen, which a foreigner becomes on acquiring real estate, provided he does not beforehand declare his intention to retain his nationality.*

* Up to the year 1886 the Mexican law recognised as a citizen every foreigner who had acquired real estate, or had a child born in the Republic, unless he explicitly made known his intention to preserve his nationality by being "matri-culated," *i.e.*, having his name and nationality inscribed in a book kept for the purpose in the Department of Foreign Affairs, and outside of the capital in the State Governor's Office, etc., but by the law of July 7, 1886, the Acts requiring the registration of foreigners were repealed. A foreigner, however, desiring to be recognised as such, may solicit and receive of the said department a certificate of nationality, which will constitute a legal presumption of foreign citizenship, but will not bar proofs to the contrary being adduced in courts of competent jurisdiction in the manner established by the laws or treaties.

An alien holding real estate in the Republic loses all right, title, and interest therein in the following cases:—

1. By absenting himself with his family from the country for more than two years without previous permission of the Government. This does not apply to mining property.

2. By residing permanently abroad, although the owner may leave a representative or attorney to look after the property and represent him; mines are also excluded from this provision.

3. By transferring the title to the real estate to any non-resident of the Republic, either by deed, will, or other conveyance. An alien thus situated must sell the property within two years from the date of absenting himself under penalty of having it sold on his account by the local authorities. In the event of there being an informer to bring the matter to the notice of the proper authorities, one-tenth of the proceeds of the sale may be retained by him; mines are not included.

Under the law, as given in substance above, the Secretary of Public Works publishes every two years the prices at which Government lands may be purchased. In pursuance thereof, the prices for such lands for the years 1891-92 have been published. The following table gives the price per hectare (2.471 acres) for land of each class:—

States and Territories.	First class.	Second class.	Third class.
Aguascalientes	\$2.25	\$1.50	\$1.00
Campeche	1.65	1.10	.75
Coahuila .. ..	.75	.50	.30
Colima	2.25	1.50	1.00
Chiapas	1.55	1.10	.75
Chihuahua .. ..	.75	.50	.30
Durango .. ..	.65	.50	.30
Guanajuato	3.35	2.25	1.50

States and Territories.		First class.	Second class.	Third class.
Guerrero	..	..	1.10	.75
Hidalgo	..	..	2.25	1.50
Jalisco	..	..	2.25	1.50
Mexico	..	..	3.35	2.25
Michoacan	..	..	2.25	1.50
Morelos	..	..	4.50	3.00
Nuevo Leon	..	..	.75	.50
Oaxaca	..	..	1.10	.75
Pueblo	..	..	3.35	2.25
Querétaro	..	..	3.35	2.25
San Luis Potosi	..	..	2.25	1.50
Sinaloa	..	..	1.10	.75
Sonora	..	..	1.10	.75
Tabasco	..	..	2.00	1.50
Tamaulipas	..	..	.75	.50
Tlaxcala	..	..	2.25	1.50
Vera Cruz	..	..	2.75	1.85
Yucatan	..	..	1.65	1.10
Zacatecas	..	..	2.25	1.50
Federal District	..	..	5.60	3.75
Territory of Tepic	..	..	1.65	1.10
Territory of Lower California		.65	.40	.25

The first-class lands comprise all such as are situated near a railroad line, a populous city, such as can be irrigated, and all offering advantages to agriculture and other interests. Lands covered with fine woods, orchil and other dye-producing plants, and those bearing minerals and salts mentioned in the Mining Code are also included in lands of the first class.

Second-class lands are those distant from means of communication, those where but one crop a year (sown before the rainy season) can be raised, and all those appropriate for cattle raising.

Lands of the third class are those which are not included in the foregoing classes.

CHAPTER VIII.

INDUSTRIES AND MANUFACTURES.

(From the Bureau of the American Republics, Washington.)

Mexico is not a manufacturing country. Such articles as the masses of the people, however, require are generally produced in sufficient quantities to meet their demands. Mexico will never become to any appreciable extent a manufacturer of articles beyond those of which she produces the raw materials, yet this field is by no means restricted.

The Indian, who forms the greater part of the labouring population, is not progressive. He is loth to lay aside the rude implements of his forefathers, or to take up methods of modern invention and progress. His needs are few, and he is not inspired with a desire to improve his condition.

He is satisfied with his lot, and cares little for what the morrow may bring forth; but the Indian is losing ground, and the whiter races are surpassing him. With increasing transportation facilities, a progressive Government fostering industrial interests, and the disappearance of internal strife, his successors will, in the not very distant future, either join the ranks of the progressive people (as in the thickly-populated portions of the Republic they have already begun to do), or they will die off, to be replaced by a more energetic and ambitious class.

Manufacturers will spring up with the increased production of raw materials, but the country's agricultural resources are so great that it is destined to become still more than at the present, a great exporter of raw material. The natural products of the soil are so varied, all of which

are so certain of good markets, that capital is diverted to agricultural and mineral development, rather than into manufacturing enterprises on a large scale. Mexico has been regarded by natives and foreigners as a land of mineral wealth only, and her many other resources are, as yet, but little noticed or developed.

Whatever may be her mineral wealth, the value of such wealth alone would be considerably lessened unless accompanied by the results of genuine industry and labour in other directions. The Mexican Government has therefore wisely appointed Commissions to study the question of aiding and fostering other than mining industries.

If the country were populated, even in proportion to Guanajuato and its outlying districts, it is estimated that the census of Mexico would show at least 58,000,000 inhabitants. Under such conditions the agricultural interests of Mexico would constitute an element of enormous wealth.

THE CATTLE INDUSTRY.

One of the most important of Mexico's industries is cattle-raising. The States of the northern frontier are so well adapted for such purposes that they may be said to constitute immense cattle ranges. The excellent situation of the lands, as well as their generally well watered condition, make Mexico a formidable rival of the Argentine Republic. Lately Texan and English capitalists have made extensive purchases of lands and livestock in the northern States, and they are now devoting themselves to the lucrative business of raising cattle for the market. But it is not only in the temperate and cold lands of the northern States that this industry may be carried on, for equally good opportunities of success are offered in the warmer latitudes, where the herbaceous vegetation is exuberant and watercourses abundant.

The States of Durango, Sonora, Chihuahua, Nuevo Leon, Coahuila, Tamaulipas, Vera Cruz, and Michoacan present admirable fields for the carrying on of this great industry. The rich pasture lands of the latter State feed the many thousands of cattle slaughtered for the sustenance of the residents of the capital of the Mexican Republic. During the year 1888 there were 83,228 cattle and 130,263 sheep slaughtered in the abattoirs of the City of Mexico alone. Some of the above-mentioned States are not well provided with water, but it has been demonstrated that, with small expense, all the necessary water can be provided by the boring of wells. In the State of Guanajuato, a company, under the patronage of the State Government, has bored wells, and begun the breeding and fattening of cattle on a large scale. This company has imported into the country a considerable number of the best breeds of horned cattle from the United States and elsewhere, and, judging from the results, their efforts are meeting with gratifying success.

Mexico raises great numbers of cattle for the United States, and does so under better conditions of climate than the latter country, where stock-raisers lose thousands of animals every year, owing to the rigorous winters and scorching summers, while in Mexico the perennial spring smiles on man and beast.

Statistics show that in 1883, in the Northern States of Mexico alone, over an area of 300,000 square miles, there roamed 1,500,000 horned cattle, 2,500,000 goats, 1,000,000 sheep, 1,000,000 horses, and 500,000 mules. In the same year there were 20,574 cattle ranches in the country, valued at 515,000,000 dols., which number and value have increased considerably within the last seven years.

Other livestock, such as horses, sheep, goats, swine, etc., are also raised on these ranches for export.

According to official statistics, during the fiscal year 1887-88 Mexico exported to the United States livestock as follows :—

Horses	...	...	22,825	head, valued at	239,342	dols.	
Cattle...	...	...	10,093	"	"	115,279	"
Sheep	...	...	71,232	"	"	119,631	"
Mules and Donkeys...			2,068	"	"	32,631	"
Other animals valued at						491	"
<hr/>				Making a total of	106,218	"	"
						507,374	"
						Mexican silver.	

HIDES AND SKINS.

Another considerable industry is the collecting and exporting of hides and skins. Mexico occupies the fourth rank among nations in this particular branch.

In the years 1887-88 that country exported to the United States hides, skins, and leather to the value of 1,718,543 dols., Mexican silver, as follows :—

Hides	...	...	value	639,880	dols.
Tanned leather	...	"	3,084	"	
Sheep skins	...	"	6,333	"	
Goat skins	...	"	943,061	"	
Deer skins	...	"	99,613	"	
Other animals' skins		"	26,572	"	

During the years 1888-89 Mexico exported to all countries, hides and skins to the value of 2,011,129 dols. Mexican silver.

The kid which is exported through the Matamoros Custom House is much used, and is highly valued by the manufacturers of strong shoes, its dimensions and weight ranking high. This kid brings from 45 to 50 cents per pound. The Vera Cruz goat skins are more sought after, and bring two cents more per pound, while those from Oaxaca are lighter and bring about 39 cents per pound.

These kids are considered among the best in the world for women's and children's shoes.

Another industry, although not a prominent one, is the killing of seals and sea lions on the coast of Lower California, the skins being converted into leather.

The exports of furs and skins from Mexico for the years below mentioned were valued as follows:—

1887-88	...	...	...	3,156,422	dols.
1888-89	...	...	...	3,376,176	„
1889-90	...	...	...	3,973,495	„

Tanneries are to be found at many places, and a very fair quality of leather is turned out. There are 33 tanneries at the Capital. Mexicans are artists in leather work, and in the making of saddles they excel. Saddles manufactured in the country have sold for more than 800 dols., being profusely ornamented with silver and finely stamped leather. The centre of the leather working industry is the city of Leon. There are no large shoe manufactories, most of the disciples of St. Crispin carrying on their trade in small huts or houses, and on the sidewalks.

SHELLS.

Among other industries may be mentioned the gathering of sponges, mother-of-pearl, abalone, and other shells, pearl-diving and tortoise-fishing. These industries, with the exception of pearls, are at present but little developed, but the choicest kind of which, as well as all the above, are quite abundant in the Gulf of California, and on the coasts of both oceans. The carey, or tortoiseshell, of Yucatan and Guerrero, has been for a long time an article of trade, which in 1883 amounted to 20,000 dols. yearly, and which has considerably increased of late years. This article is also shipped to some extent from Magdalena Bay, in the territory of Lower California. The Government

is very desirous of developing these marine branches of industry and production, and has made some very liberal concessions to companies desirous of engaging in them. In comparison to the returns, these ventures may be carried on with very small capital.

COTTON FABRICS.

The principal manufacturing industry of the Republic is the making of cotton cloth, mostly Manta, a coarse, unbleached cotton cloth. It has been estimated that the mills of the country consume annually 26,000,000 pounds of cotton, most of which is grown there, but a considerable quantity is also imported. This industry gives work and support in the field and mill to more than 50,000 families. The mills are usually provided with English and American machinery of modern type, and a few operators carry on business on an extensive scale. This ordinary cotton cloth—Manta—which is about the only material for clothing used by two-thirds of the inhabitants of the country, is usually made up in pieces of 30 yards 4 inches in length by 34 $\frac{1}{2}$ in width. The price of the piece varies from 2.88 dols. to 4 dols.

The cotton mills of the country, their location, number, annual output, and its value are set forth in the table following :—

Location.	No. of Mills.	Yearly production in pieces.	Value of product.
Federal District ...	6	452,400	1,583,400 dols.
Aguascalientes ...	3	36,000	126,000 ,,
Coahuila ...	8	302,000	1,057,000 ,,
Colima ...	2	48,000	168,000 ,,
Chihuahua...	3	90,000	315,000 ,,
Durango ...	7	150,000	525,000 ,,
Guanajuato ...	4	272,400	953,400 ,,

Location.	No. of Mills.	Yearly production in pieces.	Value of product.
Guerrero	1 24,000	84,000 dols.
Hidalgo	1 16,800	58,000 ,,
Jalisco	9 282,000	987,000 ,,
Mexico	3 186,800	653,800 ,,
Michoacan	3 114,000	399,000 ,,
Nuevo Leon	3 54,000	189,000 ,,
Oaxaca	2 72,000	252,000 ,,
Puebla	22 995,200	3,483,200 ,,
Queretaro	3 150,000	525,000 ,,
San Luis Potosi ...	1	33,408	116,928 ,,
Sinoloa	3 141,600	495,600 ,,
Sonora	1 12,000	42,000 ,,
Tlaxcala	2 26,400	92,400 ,,
Vera Cruz	8 287,700	1,006,950 ,,
Yucatan	1 15,600	50,600 ,,
Zacatecas	1 6,000	21,000 ,,
	—	—	—
	97	3,768,308	13,189,078 dols.

Besides the product above given, nearly 3,000 tons of cotton yarn, used in the manufacture of rebozos (an article serving as shawl and scarf for women), blankets, and napkins, are spun. The best rebozos are made in the town of Tenancingo. These articles are also manufactured of silk and linen. Cotton prints are also made, which sell at above 3.73 dols. per piece. Cotton and woollen blankets are also extensively manufactured, and bring from 18 dols. to 30 dols. per dozen. There are in the City of Mexico 70 factories devoted to the manufacture by hand of zarapes, rebozos, manta, and other cotton stuffs.

The manufacture of knitted goods, such as hosiery, underwear, etc., has increased considerably of late years, and has resulted in making a noticeable reduction in the

amount of imported goods of this character. This cloth is of a fair quality, and sells at from 1.63 dols. to 2.62 dols. per vara, carpets bringing from 1 dol. to 1.13 dols. per vara. A vara is 34.12 inches.

WOOLLEN FABRICS.

The weaving of zarapes constitutes a considerable industry, there being an extensive and increasing demand for them. These many-coloured woollen cloaks or blankets are well made, those of Satillo and San Miguel being celebrated for their fine texture, brilliant colours, good finish, and excellent weaving qualities.

There are in the Republic a number of woollen mills, four of which are situate in the Federal District, having a yearly production of 162,000 pieces of cloth. Mexico supports three establishments, producing 150,000 pieces of cloth and carpet per annum. Puebla has five mills, turning out yearly 550,000 pounds of yarn; Hidalgo has three factories, whose approximate yearly production is 125,000 pieces of cloth. Guanajuato has several mills, the two principal ones being located at Zempoala and Celaya which, combined, produce yearly 85,000 pieces of cloth and 50,000 varas of carpets.

It is not generally known that wool-spinning has been carried on in Mexico for more than three centuries, yet such is the well-authenticated fact. In the year 1541 the first Viceroy introduced merino sheep into the country, and established manufactories of cloth.

THE SILK INDUSTRY.

Silk-weaving can hardly be said to be a great industry as yet, but it is increasing rapidly. Silk was cultivated and sold in the markets of Mexico as far back as the time of Charles V., Cortez speaking of the fact in his letters to

that monarch; and there are still preserved pictures done by the ancient Mexicans upon a paper made of silk. For some political reason, known only to the Spaniards of the day, the culture of the silkworm, and the weaving of its product, was prohibited by the Spanish Crown in its American possessions during the Viceroyal administrations. The industry gradually died out, and it is only of late years that it has been revived.

The climate of Mexico is considered unexcelled by any in the world for the raising and development of cocoons. Silkworms are at the present time mostly raised in Oaxaca, in the State of the same name; Tetala, in the State of Pueblo; Ixmiquilpan in Hidalgo; and in the States of Jalisco, Oaxaca, Tlaxcala, Michoacan, Queretaro, Vera Cruz, Chihuahua, and Zacatecas. In all of these States, as well as in the Federal District, the white and black mulberry leaves grow. In 1886 there were four silk factories which could be considered to be well equipped. These were supplied with the necessary plant and machinery imported from France, and although small, were in the hands of enterprising men, and it was estimated at that time that these factories and others, which would be established in the future, would manufacture more silk than could be consumed by the people of Mexico. This estimate has been proved to be exaggerated, for the factories existing in the country at this time could not produce, by any means, a sufficient quantity of the material to supply the domestic demand. In the factories, women are generally employed because of the delicacy required in the work, most of the female operatives receiving only $37\frac{1}{2}$ cents per day.

The Federal and some of the State Governments have taken a great interest in this industry, and the desire to foster it was illustrated by the action of the Executive of the

State of Pueblo, who, under authority of the Legislature of that commonwealth, on the 30th March, 1886, offered to all those persons devoting themselves to silk culture within the State, a subvention of 1 dol. for each kilogramme of silk produced in the first year, and 50 cents per kilogramme during each succeeding year. Tracts of land devoted exclusively to the planting and growing of mulberry trees were made exempt from State taxes for a period of five years, in case the plantations were preserved for that length of time. The first factory of spun and woven silk goods established in the State, and deemed by the Governor to offer fair prospects of stability, was given a subvention of 5,000 dols.

PAPER.

Considering the great quantity and variety of fibrous plants and other material for paper-making, with which Mexico is endowed, it seems strange that throughout the entire territory there are only seven paper mills, two in the State of Jalisco, one in Vera Cruz, and four in the Federal District, which manufacture comparatively little writing paper, but a considerable quantity of wrapping and printing paper. How much these mills manufacture cannot be stated.

SUGAR.

Save in the States of Morelos, and some districts in the States of Pueblo, Vera Cruz, Michoacan, and Jalisco, and the territory of Lower California, the sugar industry is very backward. In most of the sugar mills the juice of the cane, on being boiled to the necessary consistency, is pressed out by wooden cylinders, and is formed into small tablets or cakes (called panelas or piloncillos) of a dark brown saccharine substance called panocha. Except in rare cases the use of steam and modern machinery is unknown. However, within the past six or seven years the

United States has sent to the neighbouring Republic considerable quantities of machinery of the best and most improved pattern, thereby to some degree advancing this industry.

DISTILLERIES.

Distilleries are to be found all over the country, yet very few of them have modern plants. These distilleries are chiefly engaged in distilling the liquor called mescal, a strong alcoholic beverage, which is either colourless or of a very light amber tint. This liquor is distilled from the root of the American agave, and has an odour and a taste not unlike Scotch whiskey. Mexicans claim that it has good stomachic qualities, but it is a great intoxicant. Another, and an exceedingly strong spirit, is distilled from the sugar cane, and is called aguardiente (burning water).

Grapes flourish in the States of Chihuahua, Coahuila, Nuevo Leon, Aguascalientes, and Sinaloa, as well as in some other parts of the country, and a very fair native wine and brandy are made of them, as well as raisins and sugar; but the industry is not a prominent one, and the production does not supply the home demand. Beer and pale ale of excellent quality are brewed, there being five breweries in the capital doing an extensive business, only one of which, however, is well equipped, and the whole number do not even supply the demand. There is annually consumed in the Republic 1,500,000 dols. of beer imported from the United States and Germany. The cost of this beer at the breweries is about 500,000 dols. Duties, freights, and middlemen's profits treble the cost.

TOBACCO.

The tobacco industry is extensive, nearly every town and hamlet having its cigarette factories, which may be counted by the hundreds in the Republic. In 1889 in the

City of Mexico there were 15 cigar and cigarette factories, and 1,201 shops exclusively devoted to the sale of cigars and cigarettes. The tobacco of Vera Cruz is considered to rival that of Cuba, and the factories of that city manufacture an excellent quality of cigars much sought after by foreigners. Cigarettes are very cheap, seven to eight hundred selling for a dollar. Good brands of cigars may be purchased at from 35 dols. to 80 dols. per thousand, Mexican coin.

FLOUR MILLS.

There are many flour mills in the country, and nearly all the millstones were imported from France. No very fine grades of flour are, however, manufactured, and the mills do not supply the domestic demand.

IRON FOUNDRIES.

Iron foundries are numerous, the excellent quality of the Mexican minerals, and their abundance, making it possible for these foundries to turn out good work. Some large pieces have been cast, but the production is mostly limited to the smaller agricultural implements and ordinary marketable iron. There are some foundries where sugar-making machinery has been constructed, and heavier work turned out, but foreign articles compete profitably against them. The Government arsenal and gun foundry in the City of Mexico has done some excellent work. Arms and munitions of war have been produced at this establishment which speaks highly for the skill and dexterity of the operatives in the establishment. Good work is also done in the two type foundries located in the City of Mexico.

POTTERY AND CROCKERY.

Pottery is classed as the third great manufacture of the country. It is carried on everywhere. The cities of

Guadalajara, Zacatecas, Guanajuato, and Puebla may be said to be the centres of this industry, although there is scarcely a village where it is not carried on. The pottery and crockery manufacture of the various localities or districts, has its distinctive features of quality, design, and colour.

The Guadalajara ware is grey, soft baked, as a rule polished, and often elaborately decorated in colour, gold, and silver. The Zacatecas ware is red, hard baked, glazed, and rudely decorated with splashes of underglaze colour. The ware of Guanajuato is in dark brown or dark green, with ornamentation of figures in low relief, and with a soft rich glaze. In Pueblo, a coarse porcelain with a thick glaze is manufactured. Very finely glazed tiles, multiformed and many coloured, are made in this State, specimens of which ornament the exterior and interior of the churches which abound in the City of Puebla, and other cities and towns of the historic State. In some parts of the Republic a curious iridescent ware is manufactured which has a copper glaze.

The crockery for table use is usually heavy and in white and blue. There are in the Federal district two extensive factories where finer grades of porcelain are made. In many places the Indians are adepts in the manufacture of earthenware, and the Mexicans generally are skilful in the fabrication of wax, clay, and rag figures, which forms one of their profitable industries. In Guadalajara, the capital of Jalisco, and Tepic, in the territory of that name, vast numbers of clay images, well moulded and painted, are produced. Foreigners are amazed at the perfect accuracy displayed by the humble artists in reproducing costumes, and portraits from life or photographic pictures. The rapidity with which the modellers perform their tasks is wonderful. Some of the

work in the clay and wax manufactured by the deft fingers of the natives has been deemed to rank with the higher works of sculpture. The specimens of Mexican handiwork in wax which adorn the innumerable churches do the artists great honour. No city in the Republic of any pretension whatever is without its itinerant vendor of rag, baked clay, and wax images.

Despite the fact that Mexico is a large producer of cabinet woods, the manufacture of furniture is but little developed. The rich and well-to-do classes import nearly, if not all, of their furniture, upon which heavy duties are levied, and the poorer classes need but little, and that of the most humble description.

VARIOUS OTHER MANUFACTURES.

Glassware is manufactured to some extent, but not to the extent warranted by the abundance of the raw materials suitable for glass making. The industry is almost limited to the making of window glass, and ordinary bottles and goblets, at prices so high that the poor are almost denied their use. An ordinary square of glass of a small size costs 75 cents. In the City of Mexico there is invested about 95,000,000 dols. in house furnishings, and 62,000 residences are furnished with more or less elegance. The residents import annually furniture, carpets, curtains, plate, glass, marble slabs, and other household accessories, to the value of at least 4,000,000 dols. These at the factory are estimated to cost about 1,000,000 dols., duties, freights, and intermediary profits eating up the rest.

There is but one manufactory of jewellery and trinkets in the country, notwithstanding the Mexican love of display in this direction. There are any number of itinerant jewellers without capital, who hawk their wares about and obtain good prices. The importations of jewellery and trinkets

from France and England amount yearly to millions of francs. The silver and goldsmiths of the country excel in the execution of filigree work, which finds a ready market in all parts of the civilised world.

The manufacture of acids and chemical compounds, which would undoubtedly be a profitable industry, has but seven establishments devoted to it, and of these two only manufacture acids, so necessary to the mining industry. Sulphuric, hydrochloric, and nitric acids are manufactured with great profit. The seven factories are located in the City of Mexico.

Another prominent industry is the manufacture of chocolate, several large factories being devoted to the converting of the cocoa bean into this article. The Mexican chocolate when ground with cinnamon is much esteemed.

Hardware is also manufactured principally in the City of Mexico.

Felt hats are made in all the large cities, and straw hats everywhere.

The manufacture of wooden and wax matches is extensively carried on in the country, there being eighteen match factories in the City of Mexico alone, and a large number in Pueblo.

A large business is done, although nowhere upon an extensive scale, in the manufacture of dulces (sweetmeats) and confections.

Gunpowder is also manufactured, but only to a limited extent.

Among the distinctly Mexican industries is the beautiful drawn and feather work, in the making of which, as well as in the spinning of horsehair

riatas, or lasso (which every Mexican carries on the pommel of his saddle), the natives of the country are unexcelled. Mexican lace has also a very high reputation.

What Mexico needs, and what would prove to be profitable investments, are paper mills, salt refineries, the salt fields being inexhaustible (a 5 cent bag of American salt costs in Mexico $37\frac{1}{2}$ cents), and pork packing and meat canning establishments.



CHAPTER IX.

MINES AND MINING—PRECIOUS METALS.

The Toltecs and Aztecs, the original owners of Mexico, like the Incas of Peru (that ancient ophir from which it is said that Solomon was supposed to have drawn such stores of wealth), worked their mines from a period so remote that no one really knew when such period began.

Their successors in Mexico have produced and exported large quantities of precious metals, and yet to-day the mineral wealth of the country seems scarcely to have been touched; and from the continued discoveries of fresh deposits of silver, and from the introduction of labour-saving implements and machinery, and the superior facilities of transport afforded by the opening of fresh railways, it is difficult to forecast the probable value and extent of silver mining in Mexico. It is at present the second largest silver producer of any country in the world, the total value of her annual productions being £8,500,000, as compared with that of the United States, which is £12,250,000. In comparison with silver, her treasures of gold are, however, almost insignificant. Rubies, and also garnets and opals are found, as well as iron, copper, tin, cobalt, antimony, sulphur, coal, and petroleum, all of which are being worked on a very limited scale. There are nearly 1,000 mining enterprises in the country, employing over 200,000 men.

There is a popular idea that a considerable number of old Spanish mines, which were worked at great profit before the Revolution and then abandoned, still exist, and

that these are now ready to return great profits to those who rediscover and reopen them.

There are literally thousands of such mines, and the crests of the hills are riddled with ancient workings in the States of Oaxaca and Chiapas, which, becoming filled with water, have remained unworkable to the present day, pumps or machinery being only needed to clear them.

These workings indicate two entirely different epochs —the one primitive and prehistoric, dating back long before the age of steel and gunpowder; the other clearly Spanish, the shafts and tunnels being cut clean, square, and regular. These were often built up and carefully concealed, no doubt with the intention of reopening them when the rising of the natives should have been quelled.

As these forsaken and unworked mines can be obtained for the mere cost of denouncement and working, and as the mining laws of Mexico provide great facilities for the acquisition of mining properties by foreigners, there is every inducement, as well as a profitable opening for experienced miners, provided that they are possessed of moderate capital and conduct their operations with prudence and economy.

The underground operations at the mines are all carried on by the native Mexicans, who have intelligence enough to be useful, but nothing more. What is wanted is good and efficient management, with skilful foremen and intelligent and experienced mechanics. These, of course, cannot be found in the country, and on that account there is an excellent opening for the intelligent artisan either of this or any other more advanced country.

The history of the past gives some very extraordinary mining successes, perhaps none of them more wonderful than that of the Santa Eulalia Mines, in the State of Chihuahua. From authenticated records, up to the year

1833, \$145,000,000 worth of silver was extracted from this mine alone in the course of a few years. This is only one instance out of many, where colossal fortunes have been made by mining, and even now, in the densely inhabited mining districts, entire communities exist upon the produce of mines long since abandoned, but which produce even now, without either skill or scientific knowledge, a return large enough to satisfy far more than the necessary requirements of the workers and their surroundings. There is a fascination to the Mexican in the working of an abandoned mine. Frequently an owner will not consent to part with any portion of mining rights that he may possess, and it is only in cases where a little capital will help him, either in another purchase, or in still further developing the property he owns, that he will listen to a proposal for a sale, and then only will he part with a portion, and rarely will he dispose of the whole.

As mining is, however, so much in the nature of a speculative business, it becomes a *sinc quā non* that judgment should be exercised in the selection of the mine, as well as in its economy in the working.

To the enormous sums paid for promotion and purchase, is due much of the loss and disappointment attending the operations of English companies. Unfortunately, there is no subject upon which public opinion in England has been so much led astray as that of mining in Mexico, nor is it surprising that those who have lost their money in such undertakings should have but a poor opinion of Mexican mines. To those who are on the spot and acquainted with the facts, the folly, extravagance, and incapacity so often shown by the boards of directors in London is a matter of constant amazement. Had the enormous capital sums supplied by English companies been spent with even a reasonable share of prudence; had the

agents dispatched by them exercised ordinary care ; or had economy been practised as well at home as abroad, the results would have been very different.

Not only in operating in Mexico, but in other countries, the same causes of disappointment exist. Boards of directors in London from those reasons have not proved successful in the prosecution of their mining enterprises.

British capital has in the past been poured into Mexico, and during the four years, according to the *Statesman's Year Book*, from 1886 to 1889, there were formed in London companies having a gross nominal capital of £36,000,000, for operating in Mexican mining, railways, and land, £18,000,000 being the amount in the year 1889 alone.

Consul Carden says, in his 1889 report :—“ Some idea can be formed of the extraordinary advance of mining interests, when it is stated that in the 17 months, from April, 1887, to September, 1888, 2,077 mines were denounced. Furthermore, by virtue of the law of June 6th, 1887, the Executive has entered into more than 100 contracts for the exploration and development of the mineral zones in the States of Mexico, Puebla Guerrero, Michoacan, Queretaro, San Luis Potosi, Yalisco, Durango, Coahuila, Sinaloa, Chihuahua, and Lower California.”

In a general way it may be said that a metalliferous vein runs through the entire Cordillera of Mexico, extending from the mines of the Sierra Madre in Sonora, in the far north-west, to the gold deposits of Oaxaca, in the extreme south. The mineral districts most distinguished for their productions of silver and gold are those of Guanajuato, Zacatecas, Fresnillo, Real del Monte, Pachuca, Catorce and Oaxaca, which are all situated within a convenient radius of the city of Mexico.

In the State of Hidalgo is Pachuca, a city of 25,000 inhabitants. Around it is a rich mining district, con-

taining over 250 mines. These are advantageously situated, from being contiguous to the City of Mexico, and are supposed to be the richest of any in the country. It was here that a colony of 350 Cornishmen and their families settled about 50 years ago, and it was also in this district that the Spaniards made their first settlement.

The silver mines in this region are very rich and number 267; 154 of this number being in Pachuca itself. One of these gives a clear profit of \$1,000 a day, this profit having continued for some twelve years. The prevailing metal is sulphate of silver, although native silver is found mixed with the ore. In thirty years \$100,000,000 have been taken from a single mine, the Rosario.

Many of the old veins, which have been worked for 350 years, are still unexhausted and yield good profits.

In the State of Hidalgo all mines, regardless of extent, are by law divided into twenty-four parts, called "barras," one of which belongs to the State and is unassessable. In locating mining property an alien enjoys the same rights and privileges as a native.

The State of Sonora, on the Pacific side, has long been celebrated for the abundance and variety of its minerals, which include the ores of gold, silver, copper, lead, iron, and quicksilver. It is the only State having two mints, which have an annual average coinage of \$1,500,000.

The southern part of the State of Sinaloa, also on the Pacific side, is especially rich in minerals, and the mining industry is here becoming very active.

The mountains of Lower California, also, form an uninterrupted mineral-bearing ridge, extending along the eastern sides from its most southern point, as far as the American frontier, but mining here is in its infancy.

Consul Carden, in his report of June, 1887, makes a valuable recommendation: "A business in which English

capital might be profitably employed, that of ore-buying for shipment to England. There are already two American agencies established in the capital for that purpose, but the cheaper rates of freight to England, and the lower cost of reduction there, would enable English firms to compete with every prospect of success. This business is likely to be one of very great importance in the near future, in view of the large number of mines which are at present unworked on account of the heavy cost attendant on the establishment of reduction works, and from which large quantities of ore of moderate quality might be exported."

It is said there are at present about 40 mining properties being worked by American companies.

The Government has created many reforms in the mining laws, and operations are now carried on under regulations drawn up in a carefully prepared mining code.

The exports of precious metals from Mexico have been :—

	1885-6.	1886-7.	1887-8.
To U. S. A. ...	\$15,406,336	\$16,576,120	\$17,915,116
To Great Britain ...	9,417,464	11,122,020	7,935,736
France ...	3,447,117	4,401,223	3,626,490
Germany ...	832,629	1,289,911	1,326,543
Spain ...	654,287	104,343	97,131
Other countries ...	58,568	66,886	105,172
 Total ...	 \$29,906,401	 \$33,560,503	 \$31,006,188

Whilst the total amount of precious metals exported in the years—

1888-9. 1889-90.

\$38,785,275 \$38,621,290

shows a considerable increase upon the three previous years.

Unfortunately, Mexico itself does not seem to have

profited much by the immense quantity of gold and silver which has every year been extracted from the earth. It may, however, reasonably be hoped that with freer and more enlightened institutions, and from the civilising influences which follows upon the opening out of additional means of communication, that the population will gradually rise to a position more in accord with the possession of such a rich and bountiful country. This emancipation of the people from their present miserable condition is earnestly and anxiously looked for by all classes in Mexico.

COPPER.

What steel to-day is to us, so was copper to the Aztecs. From it they made weapons of war, and used no inconsiderable a portion as a moneyed currency.

Their metal came from the mountains of Zacotellan and Cohuixco, from which they manufactured a kind of brass, by mixing it with tin, producing a metal of great hardness, capable of receiving an edge almost as sharp as steel. The purity and richness of the ore from that region is proved by the fact that copper axes have been found containing 98.7 per cent. of pure copper, an astonishing result when we consider their primitive mode of reducing the ore. Since then the process of smelting has made but little progress. Ingot copper of such high quality is produced, however, by a single operation, that it is capable of being hammered into boilers and other utensils.

Copper ore is now found in the Central States of Mexico, principally in the States of Zacatecas and Michoacan, the latter State having some of the richest mines in the country.

There seems also to be a promise of good mines in Lower California, a French company, under control of the Paris Rothschilds, having mines there which are

considered to be rich. They have already shipped large quantities of ore, and the property promises to become, in the near future, one of great importance. The company have already spent several million dollars in the building of a town, in the erection of works, and in the laying down of a line of railway to the mines.

There are some English companies owning mines in Michoacan, but although they are able to produce copper cheaply enough and in large quantities, yet, up to the present, the want of transport has prevented them making any large output.

It is said that in the State of Chiapas there is an immense deposit of copper ore containing not less than 200,000 tons, and which has never been touched.

IRON.

There exists near Durango the wonderful Cerro Mercado, or iron mountain, the most remarkable single deposit of iron ore in the world. According to the survey made in 1857, the mountain is 3,600 ft. in length, 1,100 ft. in width, 8,640 ft. high, and is estimated to contain above its base 200,000,000 tons of iron ore of unusual purity.

Not far from Huetamo, in Michoacan, there is a conical hill composed entirely of magnetic iron ore. The blacksmiths in the neighbourhood, with no other apparatus than their common forges, make it directly into wrought-iron, which they use for all ordinary purposes. Meteoric iron is found also in several places. Besides the above, bismuth, tin, zinc, and plumbago are found in the State of Hidalgo. Sulphur is found in the crater of Popocatapetl and other volcanoes; platinum in Tamaulipas, and a mountain near Guadalcazar, in the State of St. Luis Potosi, yields almost every known metal.

QUICKSILVER.

Quicksilver is found in several parts of Mexico, but principally in the States of St. Luis Potosi, Durango, and Guererro. Its existence for profitable mining was known to the Aztecs, who worked a mine in Chilapan, and there are records of quicksilver being sold in Mexico in 1590.

The mining operations, however, have always been carried on in the crudest fashion, with little change to the present time, using only the primitive implements, and yet sometimes making handsome profits.

Amongst the most promising quicksilver mines in Mexico are those of Guadalcazar, in the State of San Luis Potosi. This group of mines is owned by an English company, who have developed enormous quantities of ore and now promise extraordinary returns. By the erection of English machinery and furnaces, and the advantage of abundant capital, this company now turns out a larger quantity than any other mine in Mexico, but within the next twelve months they expect to produce enough quicksilver to supply the home demand, and thus avoid the necessity for importing from California and Spain. In addition to the undoubted value of these mines, they have the advantage of being near the railway, communicating direct with important centres, not too far from the coast, besides having a good and healthy climate, plenty of fuel, and abundance of water.

COAL.

The enormous increase in the consumption of fuel through the extension of the railway system, and of industrial enterprises during the last decade, has brought about a partial exhaustion of the timber in the Mexican Central Table Land. This has rendered it now an absolute necessity that foreign coal should be imported, not

only to meet the requirements of the local industries, but of the ordinary wants of the household. The heavy cost of this coal thus imported, which has ranged from £3 to £5 per ton, has greatly impeded the extension of the manufacturing industries. The various explorations undertaken in different parts of the country for the discovery of coal beds have so far met with scanty results, and have proved that either a vast portion of the continent is almost totally deprived of regular coal formations, or that if any exist, they are only extensions of the coal fields of the northern part of the continent, and would be at far too great a depth from the elevated surface of the table land to be profitably worked. The Department of Public Works has appointed scientific commissions to visit the alleged coal localities and report thereon. These have reported that anthracite deposits exist in the States of Sonora, Michoacan, Vera Cruz, Guerrero, Oaxaca, and Puebla. Deposits have also been discovered in the States of Coahuila, Tlaxcala, Hidalgo, Tamaulipas, and Nuevo Leon. Coal companies have already been formed, but the results so far have been unimportant. The lack of the ordinary means of communication between the deposits and the market has had much to do with this want of success.

The Sabinas Mine, a few miles south of Piedras Negras, in the State of Coahuila, were purchased by Mr. C. P. Huntington, the American railroad magnate. These mines produced the first year they were worked 150,000 tons, and are now yielding 250,000 tons, which are shipped to the United States of America and are not used in Mexico.

Perhaps the coal fields most important for both quantity and quality are those of the State of Sonora, where a wide carboniferous zone is known to exist.

According to the Bureau of the American Republics, very many test borings have been made at places in this State, as much as 50 miles apart. At San Marcial a vein of excellent quality was found 6 feet in thickness, at a depth of 17 feet, which continued for a distance of 10 miles in a north-east direction.

Operations are also now being carried on about 40 miles from Ortiz, a town on the Sonora Railway, between Hermosillo and Guaymas. This concession is owned by a Mexican company and covers 4,000,000 acres. The same authority states that the borings show three veins, one of 2 feet, another of 4 feet, and a third of $7\frac{1}{2}$ feet, and in a fourth it has already penetrated 22 feet, and is still working in coal. The coal tests show equal quality with that of the finest Lehigh Valley, and can be traced for miles on the surface, the four veins showing an equal thickness throughout the whole extent.

Unfortunately, we have not heard of any English engineers who have made a thorough examination of this district, and as accounts vary as to the actual quality of these coal deposits, we cannot yet give a proper estimate of the value of the Sonora coal fields.

Anthracite coal has recently been discovered at Barranca, in the State of Sonora, on the Yaqui River, 100 miles from its mouth. This coal is said to contain 90 per cent. of carbon, and is found in sandstone and conglomerate.

In 1890 the Mexican Explorations Company, Limited, secured from the Government a concession of coal land in Sonora, and proposed to build a railway to connect the collieries with part of Guaymas.

In June, 1890, there were 59 coal mines in the State of Puebla, but few of them are being worked. In the district of Acatlan, in this State, 20 of these mines exist, and a

Mexican company is now exploring 18 of them. In the district of Izucar de Matamoros, also in the State of Puebla, another Mexican company owns eight collieries.

The Government of this State are very anxious to stimulate the development of coal deposits, and have decided that all such properties shall be exempt from taxes for 25 years. It also offers a bounty of \$1,000 per year for 10 years to the first company who shall supply Puebla with a quantity of coal at a price not higher than any other fuel. Further inducements are offered to railways that shall traverse coal regions. With such exceptionally liberal State aid and State advantages, this seems a particularly well-favoured part of the country for English capital and enterprise.

From latest advices, the existence of good bituminous coal in the territory of Lower California seems almost to be assured. In the district of San Andres this knowledge seems to have existed for several years, but only within the last few months has it been thoroughly explored and examined. The coal is pronounced to be of good quality and in paying quantity, and as it is said to be within three miles of the Pacific Coast, it is easily accessible for transportation by sea. Should an extensive coal supply be assured to this hitherto unfortunate territory, it would be of greater importance to its inhabitants than even a good gold mine.

It is also stated on good authority that coal deposits exist in the district of Instlahuaca, in the State of Oaxaca. The Mexican Southern Railway will open up a very rich mining country in this State, and land which may now be purchased for a few pence an acre, must, in the comparatively near future, inevitably greatly increase in value. In the same way the International Railway will open extensive coal and iron fields which are situated up the

river from Tampico, by which the prospects of the great smelting manufacturing centres in the immediate vicinity will be considerably advanced.

It will be many years, however, before sufficient transport facilities from the different coal fields to the plateaux will be provided, to make Mexico entirely self-supporting in its coal supply, in consequence of the great distances, and the steep grades from the coal fields to the high lands.

PETROLEUM DEPOSITS.

In addition to bituminous coal, Mexico also abounds in deposits of asphaltum and liquid petroleum. These deposits have not been worked to any great extent. The consumption of petroleum in Mexico is stated to be about 5,000,000 gallons per annum, and foreign crude petroleum pays an import duty, equal to about 10 per cent. *ad valorem*, on the average market value of the refined article. Almost all the oil springs and asphalt and coal deposits are situated in localities favourable for their being worked profitably, and for easy transportation.

The entire Atlantic coast of Mexico shows traces of oil and asphaltum, but it is especially found on the northern part of the continent, between the Foot Hills and the coast.

Crude petroleum springs, running freely, are to be found on the banks of several rivers, the oil flowing into these, covering their surface for some distance. Some of these springs have a natural flow of three inches in diameter. Samples of this oil have been tested, and are reported to be of equal quality to the crude oil of Pennsylvania.

The deposits of asphaltum in the vicinity of Tuxpan and Tampico are of excellent quality, but its commercial value has not yet been ascertained. This asphalt may be

easily broken into blocks and floated down the river to the sea coast, where it may be collected and loaded into ships. The deposits of bituminous coal in the neighbourhood of Tampico are considered an important discovery, since the value of that article is greater than that of anthracite coal, owing to the superior quality it possesses for the manufacture of gas. Possibly, the reason that these valuable deposits have not been worked to a greater extent, is from the relatively small number of inhabitants, in comparison with the extent and richness of the soil, there being only about five inhabitants to the square mile; this, combined with the lack of means of communication, which has been only lately partially supplied, has naturally prevented these mineral riches from being developed. As before-mentioned, under a recent law, coal, iron, and quicksilver mines, and their products, are made free from all taxes and duties for 25 years.



CHAPTER X.

RAILWAYS.

The introduction of railways into Mexico has roused the people from their centuries of lethargy. It has done more—it has brought with it a progress, moral as well as commercial, which before long will have a bearing upon reciprocal relationships with other nations, the extent of which it is impossible to gauge. Social intercourse, hitherto impossible for want of means of communication—and the growth and development of commercial enterprises, will become important factors in the prevention of revolutionary outbreaks, which have for so long blighted a land so full of riches and promise. Now that the railway and the telegraph connect together all the principal cities, a few days only are necessary to bring troops fully equipped to any given centre, whilst, until very recently, weeks have been occupied in sending communications of importance, by special messengers, to different parts of the country. In those days of slow communication political grievances were often made a pretext for levying forced loans, or for carrying out a system of direct plunder. The advantage, therefore, of the railway and telegraph systems as direct civilisers, and as means for developing the country's internal resources, can only be fully realised by an examination of the statistics affecting the trade and revenue of the country.

The capitalists of the United States practically control the railways of Mexico. Their investments, I am informed by an undoubted authority, amount to no less than

fifty millions sterling, whilst those of England do not exceed one-fourth of that sum. It is obvious, therefore, that the true interests of Great Britain, lie in the direction of the opening up of railways on the Pacific, to connect with the gulf ports on the Atlantic seaboard, in direct correspondence with well-known steamship lines, having frequent communication with the United Kingdom.

Under the wise and progressive administration of President Diaz, railway enterprises have been encouraged, and liberal concessions granted, with subsidies of about eight thousand Mexican dollars per kilometre, payable as the sections are completed. But no more concessions with subsidies are now being granted. The mileage of railways in full operation on the 30th September, 1891, was 6,300.

FROM COAST TO CAPITAL—THE MEXICAN RAILWAY.

The City of Mexico is the starting place, as well as the objective point of nearly all the railways of the Republic, and the Mexican Railway is the first line in point of historic importance, connecting the capital with Vera Cruz. It was built entirely with British capital, and owing to the disturbed condition of the country at the time of construction, its history presents a continuous series of ruinous delays, as well as extravagant expenditure in construction, the total cost being 168,000 dols. per mile; in other words, about £6,000,000 has been expended in the construction of about 300 miles of railway, whereas a very liberal estimate would not place the cost at more than a third of the sum for a similar line if built under more favourable circumstances.

It has been carried on, however, with sagacious and honest management; and although the original cost of construction of the line has been so greatly

in excess of what it might have been, it has been to a large extent balanced by its recent monopoly of all the carrying trade from the coast to the capital, much of which has been derived from the transportation of material for the construction of other roads.

The company was registered in 1864, and the main line, having a length of 264 miles, was opened in 1873. There are three branches, one from Vera Cruz to Jalapa, 71 miles; from Ometusco to Pachuca, 28 miles; and from Apizaco to Puebla 29 miles; making a total mileage of 392. The construction of the line between Vera Cruz and Esperanza, would compare favourably with any railway in England for solidity of construction and grading; but the portion of the line from Esperanza to Mexico, although well built, is of lighter construction, as are the American railways.

The line is laid with 62 lbs. steel rails, except on the mountains, where 82 lb. rails have been laid. The gauge is 4 ft. 8½ in. The stations are commodious and well-built, and the tunnels arched with masonry, except one which is cut through the solid rock.

The Bridges are all of iron, with stone piers of sufficient strength to withstand the heavy floods following the violent tropical storms which prevail during the summer months. The length of journey between Vera Cruz and the City of Mexico is 11½ hours or less.

After crossing the Plain of Vera Cruz, and the River Soledad, there is a very heavy ascent, through a dense, tropical jungle. The first station of importance is Cordoba, with a population of 6,000, at an elevation of 2,713 ft., noted for its fruit and coffee plantations. This place is of more interest, because here the limit of yellow fever is reached. The scenery is magnificent from Cordoba to Esperanza. Half-way between these towns is the large

town of Orizaba, with a population of 20,000, at an elevation of 4,028 ft., situated in a very fertile valley, where tobacco and sugar cane are largely grown.

The area between Cordoba and Orizaba is perhaps one of the most fertile and desirable parts of the country, as here the products of three zones unite; corn and coffee, peach trees and mangoes, grapes and bananas, with extensive sugar plantations, are all found within a very limited area. The blooming gardens and luxuriant flora and vegetation, attest the value of this region for agricultural purposes.

The Coffee area in the Canton of Cordoba yields a crop of considerably over 10,000,000 lbs., which is principally exported to New Orleans.

Esperanza is situated 8,040 feet above the sea, on a plateau where large numbers of cattle are raised, and much wheat, corn, and barley grown. After Esperanza commences the region of the maguey plant, the pulque extracted from which forms an important item of freight to the Company. The grade from Esperanza is downward most of the way to the capital, which is 7,434 feet above sea level. Apizaco, the junction for Puebla, is the next important station, after which only a few small adobe towns and villages are passed. After skirting the Lake of Texcoco, the City of Mexico is reached.

The freight rates on this line have been very high, as much as £12 per ton having been charged, with 5d. per mile for passengers. Now that the charges are less than one-half of the old rates, there is greater hope of the country being developed through which the line passes, to the permanent advantage of the shareholders of the Company, the inhabitants of the plateau, and the Republic generally.

INTEROCEANIC RAILWAY.

The opening of this railway will be of direct interest and advantage to British trade with the City of Mexico and plateau, *via* Vera Cruz. The line is now completed between the latter city and the capital, a distance of 343 miles.

The railway connects the important towns of Irolo, San Martin, Puebla (with nearly 100,000 inhabitants, and one of the greatest manufacturing centres in the country), and San Marcos, Perote, and Jalapa.

The gauge of the railway is 3 ft., its maximum gradients, which occur between Vera Cruz and Jalapa, being $2\frac{1}{2}$ per cent., or 1 in 40.

The reduced freight rates, consequent upon the competition between this railway and the Mexican Railway, will be a great boon to the merchants of the interior. The almost prohibitive rates which have so long prevailed have prevented the opening out of the country. Intermediate rates of freight have been so high as to cause the continuance of the original method of carriage by donkey and mule back. The competition now commenced has already created considerable activity in freights to the capital, and the present traffic returns of this railway show a very satisfactory result; but we may naturally expect that, as soon as the trade shall have sufficiently developed, the competing railways will enter into arrangements for the prevention of unnecessary cutting of rates. The moderate capital cost of constructing this line, combined with its comparatively light gradients, will certainly place the company in an advantageous position for competition, when the road is in satisfactory running order.

The rich and productive country through which it passes, and from which a large local traffic is now being

obtained, affords every promise for its steady and continuous development. There are extensive areas of untilled land, these lands being equally suitable, and at the same altitude, as the best coffee-growing lands in Mexico.

The district of Jalapa is one of the most fertile in the Republic, its principal products being coffee, tobacco, and grain. Near Las Vigas, between Jalapa and Perote, is a group of mines producing lead, silver, copper, and gold. The town of Perote was formerly the halting place for tropical produce on its way by road to San Marcos, at which point the Interoceanic and Mexican Railways now cross each other. The district round Perote is well cultivated, and the amount of produce raised annually is considerable. The plains between Perote and Varela are principally devoted to the raising of cattle, horses, pigs, etc. The City of Puebla is considered the second city in the Republic in importance, and the first city for manufactures, which consist principally of cotton goods, crockery, glassware, shawls, and scarves. In its vicinity are quarries of good marble, which is in demand for building purposes.

The Ataoyác Valley, between Puebla and San Martin, is both rich and fertile, and is now being thickly populated, and a large area has been brought under cultivation.

In the neighbourhood of San Martin there is some very fine timber, principally pine and oak. Of the section of railway from Mexico to Jojutla, the upper portion passes through a good agricultural country, the centre portion running adjacent to large forests, and the lower portion traversing some of the finest sugar-producing plantations in the Republic, the principal towns passed being Ameca, Cautla, and Yautepec. For five months in the year there is a large traffic in tropical fruits of every kind and description. The branch line from Los Arcos to Matamoros is of very much the same character as the section from

Mexico to Jojutla. It was originally proposed to carry the line from Jojutla, a distance of 122 miles, through the State of Morelos down to the port of Acapulco, on the Pacific coast, thus making an interoceanic connection, but this route has been abandoned in view of a concession having been granted to a company by the Mexican Government for the construction of a railway from Matamoros Izucar to Acapulco.

This company has secured a large tract of land immediately south of Jojutla, through which the line will have to run, in order that there may be no difficulty hereafter in continuing the line when it is found convenient and profitable to do so.

The company's branch lines are from Los Arcos near Puebla to Matamoros de Izucar, 48 miles; San Lorenzo to San Nicholas, $6\frac{1}{4}$ miles; and Vireyes to San Juan, 7 miles.

FROM UNITED STATES TO MEXICO.

The construction of railways from the United States into Mexico has already done much for the American manufacturers.

There are at present two direct main trunk lines into Mexico from the United States, the broad gauge Central Railway Company, *via* El Paso, and the narrow gauge National Railway Company, *via* Laredo. There is also a third line, the "International," which commencing at Eagle Pass, or Piedras Negras, on the Rio Grande frontier, joins the Central Railway, with which it has a working arrangement. At Torreon there is a fourth line, the Sonora Railway, commencing at Benson, in Arizona, and running to Guaymas, on the Gulf of California. There are still other lines either under construction, or talked about, including one commencing at Deming, to develop what is supposed to be one of the richest mining and agricultural sections of Northern Mexico.

Work has been commenced on a road from Corpus Christi, Texas, having also ambitious designs upon the Mexican carrying trade, but its construction has been temporarily suspended. It is at present confidently stated in the United States, that within a few years Mexico will be connected with that country by more than half-a-dozen railways. This desire to multiply the means of transportation with Mexico, indicates more than a mere competition for Mexican trade, and shows that the capitalists who are furnishing the money for the building of these new roads are aware of the country's natural resources.

It is certain that Mexico's trade to-day is not sufficient to support all the Northern and Southern roads now constructed, or projected, and in consequence of the mutually restrictive tariffs between the two countries, the present railway system, with its three separate entrances from the United States into Mexico, is rendered more difficult for profitable working; yet it is beyond dispute that already these lines of railways have been of great service to the Americans.

The opening of these railways, and development of districts, connecting inland towns with capital and seaports, attracts capitalists from America, and thus the most important Mexican railways are those running northward towards the American frontier.

MEXICAN NATIONAL RAILROAD COMPANY.

This line is one of the three routes connecting the capital with the United States, and was the first line to connect the two countries. The main line runs between the City of Mexico and New Laredo on the northern frontier. The route taken is due west, after leaving the Colonia Station in the City of Mexico, passing through the fertile valley of Mexico, and the town of Tacuba, where there is a line to El Salto. Soon after the ridge forming

the western boundary of the valley begins, there the line ascends to the great height of 9,974 ft., and descends to the valley and town of Toluca, which is at an elevation of 8,653 ft. The land around here is well cultivated, and wheat is extensively grown. Here the direction of the line is north-west, passing through Acambaro, from which place a branch line runs to Patzcuaro; at Celaya the line is crossed by the Central Railway. Here the direction becomes due north through San Luis Potosi (one of the largest towns in Mexico, the centre of a mining district, and important for its trade in hides and skins) until it reaches Saltillo. Between here and Monterey, the next station to the east, the scenery is very beautiful, and the land well cultivated. The line continues northwards across a broad plain through Lampazos to the terminus of the line Nuevo Laredo. This town is separated from Laredo, Texas, by the Rio Grande. The length of the trunk line is 937 miles, but including the branch lines, the total mileage is 1,219. The Texas-Mexican line, which is owned and worked by the Mexican National Railroad Company, runs from Laredo to Corpus Christi, Texas, an important seaport on the Gulf of Mexico, a distance of 162 miles. The gauge of the whole line is 3 ft., the weight of the rails is 40 lb. per yard, except on the mountain, where it is 45 lb. The time taken by this route from the capital to Laredo is $40\frac{1}{2}$ hours, and to New York five days, the distance being 2,844 miles, and is the shortest line from the latter city. The line is generally supposed to belong to the Americans, but as the bonds and a large amount of shares are held in London, it is only a nominal ownership.

MEXICAN CENTRAL RAILWAY.

This is another of the railways connecting Mexico with the United States, *via* El Paso del Norte. It received its charter in 1880 from the Government. The offices of the

company are in Boston, Mass., but a considerable amount of shares and bonds is held in Great Britain. The line was opened in 1884. The main line is 1,223 miles in length, with two branches—from Irapuato to Guadalajara, 161 miles; and from Aguas Calientes to Tampico, on the Mexican Gulf, 412 miles. The line is built on the American plan, and the grading and solidity of construction compare very favourably with American railroads built through similar districts. The gauge is 4 ft. 8½ in., 56 lb. steel rails being used. The line runs in a north-western direction after leaving the capital from the railway station of Buena Vista, which is at an altitude of 7,347 ft., passing through Huehuetoca and Marquez at an altitude of 8,134 ft.; thence the grade is downward to San Juan del Rio. The line here enters a fertile valley, passing Queretaro, the scene of the tragic death of the Emperor Maximilian, and Silao, which lies in a district where two crops of wheat and maize are raised annually. Here is a branch line, connected with one of the richest mining districts in Mexico. The next place is Aguas Calientes, where there are hot springs, from whence a branch runs through San Luis Potosi to Tampico on the Mexican Gulf. After passing Aguas Calientes, the road traverses a flat, barren country, with a sparse population, until the Sierra Madre is reached, on which the important mining town of Zacatecas is situated, at an altitude of 8,044 feet, with a population of 75,000.

Shortly after leaving this town the crest of the ridge is reached, when the railroad descends rapidly to Lerdo (3,725 ft.), where it joins the International Railway, and where cotton, grain, and sugar cane are very extensively grown. Between this and Jimenez (4,531 ft.) the line passes over an arid, waterless plain, where artesian wells have had to be sunk in order to supply the locomotives

with water. The country improves again near Santa Rosalia, which is reported as being famous for its hot springs, and then the fine plain of Chihuahua is crossed. This is another important mining centre. Between here and El Paso, the terminus of the line, is a country well adapted for cattle-raising.

At El Paso, across the Rio Grande, on the United States side, are the stations of the Southern Pacific, Missouri Pacific, and the Atcheson, Topeka, and Santa Fé railways. The time taken between the City of Mexico and El Paso is 60 hours.

THE MEXICAN INTERNATIONAL RAILWAY

Connects Eagle Pass, in the State of Texas, with Torreon, near Lerdo, on the Mexican Central Railway. It forms part of the United States Southern Pacific Railway system, but the line being in Mexico, it is incorporated as a separate company under the Mexican law, and is operated independently of the Southern Pacific. The construction of the line was commenced in 1882, and was opened for through traffic in 1888, although part of the line had been in use for some time. The trains are run in connection with the Mexican Central Railway and the Southern Pacific System; the latter having a branch from Spofford Junction to Eagle Pass, 34 miles distance. An iron bridge, 930 ft. long, over the Rio Grande connects Eagle Pass with Piedras Negras. The length of the line is 410 miles; the time occupied between Piedras Negras on the Mexican frontier and Mexico City is 60 hours. The line is 4 ft. 8½ in. gauge, the gradients are favourable, and the railway is well made and ballasted. The portion of the State of Coahuila traversed by the International Railway is fertile, and affords good grazing for cattle in the rainy season. Cereals, sugar cane, and cotton are cultivated at various points, but this region is very liable to

droughts. The town of Sabinas, on the railway, is situated in the bituminous coal region, which extends over an area of 40 by 62 miles. The mines of Hondo, to which there is a branch line from Sabinas, 12 miles in length, supply coal for consumption on the International Railway, and for transportation over the Mexican Central. An extension of the line to Durango, a distance of 160 miles, has just been commenced. This will tap almost the only iron mine in the country, the "Cerro Mercado," one of the many iron mountains of Mexico.

THE SONORA RAILWAY.

This line runs between Benson, a station on the Southern Pacific Railway, to Nogales, 88 miles, the frontier station between Arizona and Mexico, and from Nogales to Guaymas, on the Gulf of California, 265 miles. The line is owned by the Atcheson, Topeka, and Santa Fé Railway Company. The gauge is 4 ft. 8½ in., and the time taken from Benson to Guaymas (353 miles) is 19 hours.

The line runs through a fine cereal and grazing country, and passes some thriving towns, chief of which are Hermosillo, with a population of 15,000, Magdalena of 3,000, and Guaymas of 5,000. The State of Sonora has great mineral wealth; gold, silver, lead, iron, copper, tin, antimony, and sulphur are found in the regions adjacent to the railway. Anthracite coal has also been discovered at Barranca, and rosewood, ebony, and logwood are found in abundance in the vicinity of the line.

MEXICAN AND CENTRAL AMERICAN RAILWAY.

This railway (which is in the hands of an English company), as at present arranged, will be in two divisions. The northern division will run in a south-easterly direction, along the Gulf Coast of the State of Vera Cruz, from the city of that name, to Minatitlan near the port of Coatzacoalcos, at the Atlantic end of the Tehuantepec

National Railway Company, with which it connects, and over which it has running powers to reach its southern division.

The line has been completed from Vera Cruz to Alvarado, a distance of about 44 miles, and located nearly its whole length, and surveyed to the port of Anton Lizardo, the best and safest natural harbour on the Gulf, affording safe shelter from any storm. The gauge will be both 4 ft. 8½ in. and 3 ft., to enable it to exchange traffic with any railway in Mexico.

The southern division will connect with the Pacific end of the Tehuantepec National Railway, at San Geronimo in the State of Oaxaca, running along the coast, to Tapachula near the frontier of Guatemala, where the line will connect with the port of San Benito, in the State of Chiapas, where a railway pier has been constructed.

The lands through which this line passes, both on the north and south, are likely to provide valuable freight. On the north, in the extensive zone of the Tierra Calientes, of the State of Vera Cruz, are some of the best tobacco lands of the country, which produce a leaf rivalling that of Cuba.

The south line, which will be of easy construction, traverses through rich alluvial plains and immense cedar forests; dye woods, mahogany, india-rubber, and vanilla are largely produced, and will supply extensive freightage to the railway.

There are cultivated in that region large crops of sugar cane, indigo, coffee, cotton, sisal hemp, ramie fibres, rice, corn, beans, every kind of pepper, tobacco, and all kinds of tropical fruits. Large numbers of cattle are exported to Guatemala, which, with the heavy crops of coffee, will furnish much traffic for the railway.

It is confidently stated by the Mexican papers pub-

lished in American interests, that in the course of three or four years it will be possible to travel direct to South America by this route.

Unfortunately this is not correct, as the difficulties at present of passing through the territory of Guatemala are very great; the President too, Senor Don M. L. Barillas, is unpopular, and any concession granted by him would most likely be disallowed by his successors.

MONTEREY AND MEXICAN GULF RAILROAD.

This railway has recently been completed between Trevin (formerly Venadito) on the International Railway, S.E., through Monterey, Linares, and Victoria, to Tampico on the Gulf, a distance of 390 miles, where connections are made with the various transatlantic and coast steamers. The gauge is 4 ft. 8½ in. The time taken is about 16 hours between Venadito and the Gulf.

PROGRESO AND MERIDA RAILWAY.

This line runs from Progreso, a port on the Mexican Gulf, to Merida, the capital of the State of Yucatan, which has a population of 62,000. Narrow gauge lines also run from Merida to Valladolid, 35 miles; Merida to Peto, 25 miles; and Merida to Kalkini, 16 miles. The latter branch is intended to be extended to Campeche.

This railway has been built to accommodate the rapidly-growing trade in Henequen fibre, of which Merida is the centre. The length of the line is 30 miles, gauge 4 ft. 8 in.

MEXICAN SOUTHERN RAILWAY.

The concession under which this railway is being built is for a line from the City of Puebla to Tehuantepec, on the Pacific Ocean. The company is subsidised by the Mexican Government for a period of 15 years. The line is constructed on the narrow or 3 ft. gauge, and is intended to form a through system of communication with

the Interoceanic and National Railways, running from the United States frontier, to Southern Mexico and the Pacific Ocean.

The line, as authorised, will be made in three sections; the first, which is the only one completed, extends from the City of Puebla to Tecomavaca, a distance of 139 miles; this is now being worked by the contractors. The second section, starting at Tecomavaca and ending at Oaxaca, embracing a distance of 89 miles, is in course of construction, and from the latest information received, it seems to be probable that trains will be running on the entire length before the end of the year 1892.

The opening up of this, the richest and most fertile portion of the great State of Oaxaca, must prove not only highly profitable to the projectors of the railway, but should also be of great advantage to the entire Republic.

When the Spaniards invaded Mexico they found in the region of Southern Mexico, a country that had been inhabited from time immemorial, by a people who had held and tilled the soil for hundreds of years, before the white man had reached the New World.

Therefore, every portion of the country capable of tillage by their primitive methods has been carefully and almost exhaustively cultivated. It is comparatively so thickly populated, that it is not a country for immigrants, but from the earliest times the State of Oaxaca has been looked upon as the land of gold. The chief tribute to Montezuma came from the sands of its rivers, and the Spaniards were told of unconquered Indians living there, who guarded vast and unknown treasures. In consequence of the knowledge gained at that time the great Conqueror, Cortés, arrogated to himself the title of "Marquis of the Valley of Oaxaca." It is the native State of President Diaz, who is the owner

of considerable property there. In the catalogue of its natural wealth are included silver, gold, copper, lead, iron, slate, and coal, and perhaps quicksilver and precious stones. The stories of early times of the fabulous wealth of this district, are so numerous and fascinating, that it is difficult to avoid making more than a passing mention of them.

But now that the means have been provided for the transportation of machinery necessary for the treatment of this mineral wealth, the opening up of this line will no doubt add materially to the financial success, as well of the district, as of the Republic.

The City of Puebla, from which the line starts, has a population of 90,000 to 100,000, and is, as already stated, the second in importance in the Republic, and its chief manufacturing centre.

When the third section of the line is completed to Tehuantepec it will form a very important link on the through railway route from Mexico to Panama and South America, a route so strongly recommended by the Pan-American Congress held in Washington under the auspices of the American Government. It will connect by the Tehuantepec National Railway with the southern division of the Mexican and Central American Railway Company, by which it will reach the frontier of Guatemala at Tapachula.

NATIONAL RAILWAY OF THE Isthmus of TEHUANTEPEC.

Concessions for this line have been granted at various times, and the surveys date so far back as 1848. The last concession was obtained by Mr. Edward McMurdo, of London, in October, 1888, the peculiarity of its terms being that, instead of passing into the hands of the Mexican Government at the end of 99 years, like other

Mexican railway concessions, the railway will become the property of the Government so soon as it is completed and open for traffic.

The approximate length of the line will be 205 miles, about 40 of which are still uncompleted. The terminal point on the Gulf side will be Coatzacoalcos, a place situated at the mouth of the river of that name, capable, from its having a good depth of water, of being made, at a comparatively small cost, into a good harbour. On the Pacific coast, the terminal point will be Salina Cruz, the town of Tehuantepec itself (population 7,955) being distant about $11\frac{1}{2}$ miles north of Salina Cruz.

The region traversed by the railway is very sparsely populated, the inhabitants being almost entirely Indians. The railway will have a rapid rise of about 700 ft., from the Pacific coast till the watershed is reached, when it will descend gradually to the Gulf of Mexico. There are some rivers but no high mountains to be crossed, and the country is of an undulating character; 125 miles northwards all is heavy jungle, with a densely tropical vegetation, growing on a very rich soil, and capable of producing rice, sugar, tobacco, coffee, and cotton. To the south of this region, the country is open and suitable for grazing; a large quantity of indigo is raised annually, dye woods, such as fustic (Palo morral) and Brazil wood are plentiful, but mahogany and cedar woods, once very abundant, have been quite exhausted near the rivers, and no trees have been planted to take the place of those so mercilessly cut down.

This line will form the connection between the Pacific and Atlantic Coast Railways of Southern Mexico.

Unfortunately, at present the construction of this railway is suspended, the only work now carried on being the keeping of the road bed and track in repair; nothing at present has been decided upon as to when the

construction will be recommenced. The railway will undoubtedly be finished, either by the Government itself or by some existing railway company, possibly, the Mexican Southern, who are perhaps in a good position for finishing the work.

There can be no doubt of the advantageous location of the Isthmus for a transcontinental line. A glance at the map will show that the Isthmus of Tehuantepec lies in the most direct line of route for the commerce between Europe and Asia, especially for all traffic seeking Gulf ports, at Vera Cruz, Tampico, etc.

In addition to the saving of distance, there are special nautical conditions which favour sailing vessels; as by this route they avoid the region of calms which are usual on both sides of the Panama Isthmus, in the Caribbean Sea, as well as in the Pacific Ocean. These conditions are greatly in favour of the Tehuantepec route for a transcontinental route.

THE MEXICAN PACIFIC RAILWAY.

This is another railway under construction, to connect the Atlantic with the Pacific, and which is intended to unite the Port of Tonala, on the Pacific, in the State of Chiapas, with Frontera on the Gulf Coast, in the State of Tobiaco. This company was registered in London in November, 1888. The railway naturally divides itself into two sections—the first, or southern, from Tonala on the Pacific Coast, to San Cristobal, the capital of the State of Chiapas, a length approximately of 500 kilometres; and the second, or northern, from San Cristobal to the Gulf of Mexico, an almost equal distance. It connects with the Mexican and Central American Railway near Tonala.

The gauge of the railway is 4 ft. 8½ in., and the southern division, at the Pacific end of the line, has been constructed

and opened for traffic, from Tonala to Aurora, near the foot of the Sierra Madre range of mountains, a distance of 50 kilometres—about 30 miles.

At Aurora the ascent of the Sierra Madre range commences, and the works will be of the usual mountain character, comprising considerable rock cutting and one tunnel.

The descent from the summit, on the north side towards Tuxtla, presents more favourable features, and the line in its course traverses long, fertile, well settled valleys, the maximum grade in this case being two per cent. The ascent from the Grijalva Valley, in which Tuxtla is situated, to San Cristobal will involve mountain work for a distance of 90 kilometres.

Rails and other construction material are on hand sufficient for 70 miles of line, in addition to that already opened for traffic.

The agricultural possibilities for the line indicate a very productive investment for the shareholders, as the railway is planned to pass through some of the richest and best watered lands of the two States, where coffee, cocoa, fibres, tobacco, cotton, sugar, rubber, grains, and many varieties of fruits may be grown almost without cultivation.

In Chiapas large areas are being planted with coffee, cocoa, and india-rubber trees, and the sugar industry will be largely developed when the planters can take advantage of the outlet furnished by the line, as there are at present some 64 sugar estates. A recent report to the Government states that these 64 plantations could with reasonable development yield about 100,000 tons of sugar yearly. At present, for lack of means of transporting the sugar to market, they are limited in their production. The primeval forests contain pine, oak, mahogany, cedar, and dye woods. There are also good grazing lands where cattle-raising might be made a profitable industry.

About 25 miles from the port of Tonala the railway passes between two mountains, estimated to contain many million tons of rich iron ore, and arrangements are in progress for the development of the ore. The recent changes in the Mexican tariff greatly favour the establishment of iron furnaces in Mexico, the present import duty being 30 dols. per ton on common pig iron.

On the northern division the line will pass through an extensive petroleum field, from which it is believed a large traffic will result.

Excellent hardwood fuel for the locomotives can be obtained at cheap rates along the whole length, and the timber traffic on the line, especially in pine and oak, should attain considerable dimensions.

According to the *Mexican Financial Review*, the necessary funds for completing this line have been arranged for in London. As this railway will traverse the Forests of Chiapas and Tobasco (an almost unexplored region), the antiquarian interest of this portion of Mexico will some time or other, no doubt, be considered more worthy of investigation than the heart of Africa. Here are crumbling beneath the tropical vegetation and mould of a Tobascan forest, the silent ruins of many phantom cities of prehistoric age. The wonders of the ruined temples, mounds, and palaces of Palenque, with their remarkable hieroglyphics and bas reliefs, are among the grandest records of ancient Mexico. The famous tablet of the Cross was discovered here, and there are many equally interesting remains yet to be unburied from this interesting region. It is said that in this part of the country there yet exists a veritable aboriginal city, preserving and retaining all of the ancient rights and customs of their progenitors. There are savage tribes of Indians in the heart of the country, but those met with in the

settlements are spoken of by travellers as having many interesting traits of honesty and amiability.

SHORT LINES.

The Michoacan Railway and Mining Company, Limited, an English company, has built a short narrow gauge line to its works from the town of Maravatio, 138 miles distant from the City of Mexico, on the Mexican National Railway. It is in contemplation to extend the line southward to the town of Zitacuaro, which is situated in a fertile region, and then to form a junction with the Interoceanic Railway at Iguala (should that line be continued to the Pacific coast), under the title of the Maravatio and Iguala Railway Company. The mines of this company are at Angangeo, and have been worked for a period exceeding 200 years. The reducing works, which have been lately extended and fitted up with the most improved machinery and fittings, are situated a few miles distant, at a place called Las Trojes.

SINALOA AND DURANGO RAILWAY.

This line, which is only 39 miles in length, runs between Altata and Culiacan, in the State of Sinaloa, and is only of local importance. Altata is a port on the Pacific, and Culiacan is the distributing centre for the surrounding region. It is intended to continue the line to the City of Durango, which is distant from Altata 225 miles.

THE MEXICAN NORTHERN.

The Mexican Northern is almost entirely used for carrying mining products. It runs from El Puerto and connects with the Mexican Central at Escalon in the State Chihuahua. The length of the line is about 100 miles, although the total length when completed will be about 159 miles. The gauge is 4 ft. 8½ in., and the company is entirely American.

THE HIDALGO NARROW GAUGE RAILWAY.

The Hidalgo system of narrow gauge railways commences at Irolo, a station on the Mexican Railway, $77\frac{1}{2}$ miles distant from the City of Mexico, and runs to Pachuca the centre of a great silver mining region. The entire length of the line from Irolo to Pachuca is 37 miles. A new branch has just been completed from San Augustin, a station between these two points, to Teolozucan, a station on the National Railroad, thus shortening the distance between Mexico and Pachuca by 20 miles. The length of this branch line is 33 miles, and the trains are running between the City of Mexico and Pachuca, *via* the National Railway.



CHAPTER XI.

ATLANTIC PORTS—VERA CRUZ.

The seaports of a country have a great influence upon its development and commercial possibilities. Something, therefore, must be said as to the existing, as well as to the future, gateways of Mexico on the Atlantic seaboard, for to European traders this is a matter of the greatest importance.

Hitherto Vera Cruz has been the principal seaport of Mexico. Unfortunately, this name brings up associations with the dreadful yellow fever, which has so long raged here, but which has greatly diminished since the encircling walls of the town have been demolished. It is not agreeable for Europeans to run the risk of taking that terrible disease by entering Mexico by this port, and it would be well, therefore, whenever it is possible, to choose the alternative port of Tampico, which is nearly free from this scourge.

Notwithstanding the immense disadvantages of Vera Cruz, the trade of that port has made a substantial increase during the last few years.

The town of Vera Cruz, with a population of 22,000 inhabitants, has an annual mortality of 50 in the 1,000, and the heat and humidity of its climate are never likely to develop activity and physical energy in its inhabitants. However, now that the International will be competing with the Mexican Railway Company, the cheaper freight route should provide the port of Vera Cruz with abundant commerce both as regards local and through traffic.

Vera Cruz has no harbour accommodation and no protection from the "Norther," which blow at times with hurricane force; neither has it even the advantage of an open roadstead, there being no depth of water nor anchorage, thus rendering lying off the port both difficult and dangerous.

Certain planned harbour improvements at Vera Cruz are making but slow progress. The works have been entrusted to unskilful engineers, who have been too often changed. This, with a deficiency of plant, money, and experience, has been the cause of great delays. Had the contract been entrusted to some English firm with capital and experience in works of such magnitude, the Vera Cruz harbour improvements would have long since been completed, together with all the modifications found necessary for correcting the errors existing in the original plan.

The Custom House of Vera Cruz, which has at present the most important business of any in the Republic, is ably and honestly administered, and Consul Carden in his 1890 report pays a very high compliment to Senor Deheva, the Collector of the Port. In his 1889 report he, however, draws attention to the excessive landing charges which continue to be a cause of great dissatisfaction to importers, and also to the inconvenience at present existing for want of the proper machinery for landing and shipping freight, the Cargadores hauling all goods on little trucks over uneven ground, which naturally causes much useless labour and expense, besides delay, and frequent damage to the goods themselves, from the rough handling to which they are necessarily subjected. It will be seen by a comparison of their respective conditions that Vera Cruz has not the natural advantages of Tampico, which port will be much heard of in the future growth and development of Mexico.

TAMPICO.

The opening of the port of Tampico to ocean-going ships will exercise an important influence upon the future British trade with Mexico. The geographical situation and convenience of access of Tampico with the City of Mexico, and the central table land and cities of Monterey, St. Luis, Potosi, etc., are important factors in giving to Tampico substantial advantages over any other seaport on the Atlantic seaboard.

Thirty-five years ago Tampico was a place of considerable importance, and nearly equalled Vera Cruz. On the construction, however, of the Mexican railway to the City of Mexico, it sank at once into insignificance. Tampico is situated on the River Panuco, about five miles from its mouth, and the river, with its confluent, the Tamasi, is navigable for many miles higher up. The entrance to this noble river is obstructed by a sand bar, to remove which jetties of about 5,000 feet long are now being constructed on either side. These are forcing the river to wash away the bar, which is steadily retreating before them, and will very soon reach the deep water edge and be washed over it. They will also control the river current and prevent silting up. These jetties are similar to those at the entrance of the Mississippi river, and when this channel is completed it will have a minimum depth of 24 feet. The work is being done by a well-known contractor for the Government, who pay for it by an issue of Government bonds of three and a-half million dollars. When completed, Tampico will become one of the finest harbours on the Atlantic or Gulf side of the continent, and ships of the largest tonnage will lie safely and discharge their cargoes alongside the town quays.

The opening out of the railways in connection with the port of Tampico has naturally created an unprecedented

activity as well in commercial as in shipping circles. The pressure of traffic has been so great, and the difficulty experienced in meeting the transit demands so serious, that in addition to the Harrison and other steamship lines which call there, the West Indian and Pacific Steamship Company found it absolutely necessary, in September last, to put on a special steamer.

Besides the extensive harbour improvements, new docks, wharves, warehouses, offices, and residences are under construction, so that at this moment there is probably greater business activity existing in this new port of Tampico than in any other city on the North or South American continents, and its commercial importance is proportionately on the increase. Tampico presents an appearance totally unlike the ordinary Mexican town, in this respect, that the buildings, instead of being one-storied and flat-roofed, have several floors, gable ends, and roofs covered with brown-coloured tiling resembling the buildings of a well-built seaport on the Mediterranean.

The town is picturesquely situated on a succession of beautiful green hills, rising to an altitude of 300 feet, thus affording natural drainage into the swiftly-flowing Panuco and Tamesi rivers. The sanitary condition of the city is excellent. The Board of Health is on the alert, and takes every precaution to prevent the introduction of contagious diseases. The streets and public squares are swept daily, and the market fish dealers are not permitted to sell fresh fish between 9 a.m. and midnight. In this way the fish caught during the night must be disposed of in the early morning hours. These and many other similar ordinances, all of which are rigidly enforced, tend to make Tampico perhaps the cleanliest city in the Republic. It is confidently stated that there has not

been a case of yellow fever there since 1879, when it was brought in by vessels from New Orleans.

The soil surrounding Tampico is exceedingly rich and fertile. Unfortunately, small advantage is taken of this, and little, if anything, is raised therefrom for export, but, with the railways opened, capital and enterprise will follow, and the agricultural riches of which the region is capable, will be developed, and Tampico will become the future Atlantic port for European shipping. Even to-day it is literally a land flowing with milk and honey, for cattle breeding and the collection of honey form the principal occupations of the inhabitants. The forests abound with valuable timber. Consul Carden says, in his report on this district, No. 396, "That a large business may be done by collecting rubber and resinous gums and by the cultivation of numerous tropical products, such as tobacco, vanilla, and coffee, for which the soil is well adapted." There is also a considerable industry in the collection of medicinal herbs (especially sarsaparilla) and of the aloe, which yields a fibre known as ixtle. Some sugar cane is also cultivated, as well as maize, fruit, and other articles required for home consumption. Potatoes, tomatoes, etc., could be planted and harvested at all seasons of the year, while groves of oranges, bananas, and cocoa nuts would yield a handsome income to anyone cultivating them.

The orange trees in the streets and plazas of Tampico are in the season weighed down with fruit. Fig trees twelve feet high are common. The vine is scarce, yet when planted grows and thrives wonderfully. Cotton needs planting only every three or four years, and irrigation is unnecessary.

The principal articles imported are cotton goods, canned goods, hardware, agricultural implements, and

domestic and mining machinery. The annual value of the exports for the past five years has averaged £176,193.

The exports to the United States from Tampico for the three months ending March 31st, 1891, amounted to £32,149, and consisted principally of honey, sarsaparilla, dyes, woods, gum, vegetable fibre, and coffee.

The Mexican Central Railway Company has completed its line from Tampico to St. Luis Potosi, a distance of 270 miles, where it connects with its own system by a short line to Aguas Calientes, bringing the City of Mexico within 800 miles of the port of Tampico. The gradients of this line are far less severe than are those from Vera Cruz, being of the relative proportion of 3½ per cent. to the former and 4 per cent. to the latter, thus considerably affecting the working cost.

St. Luis Potosi, from its position at the junction of the Mexican, Central, and National Railways, is (with its population of 60,000) rapidly assuming great importance. It has many industries, and will soon become the centre of a great mining district, which is rapidly developing around it. It has now more business animation than almost any city in the Republic, the capital of course excepted.

MONTEREY.

The Monterey and Mexican Gulf Railway Company, perceiving that Monterey was the natural distributing and smelting centre for the vast mineral regions situated north and west of it, has continued its line to connect Monterey with Tampico, a distance, *via* Victoria, of about 300 miles.

This railway now makes the former city the principal smelting centre in Mexico, and as other industries have been equally quick to recognise the advantageous location, Monterey is now often referred to as the Denver or Pittsburg of Mexico. New companies are expending

millions of dollars in erecting smelting works, which will provide this rising city with a smelting capacity of 1,300 tons of ore per day. The transportation of this material will produce an enormous accession to its freight traffic, besides producing a considerable local trade and giving employment to a large number of hands. Already a brewery is being erected at a cost of \$300,000, with a capacity of 3,000 barrels of beer per month.

It is a city of 55,000 inhabitants, with an excellent and equable climate, and only needs a good and comfortable hotel to make it a most desirable city to visit.

From the latest advices, such an hotel is contemplated, and it is even stated that a contract has been entered into for its erection, to be conducted on the American system, at a cost of \$200,000.

The railway from Monterey to Tampico runs through an almost level and wonderfully fertile valley, abundantly supplied with water.

The climate in this region is most favourable for the culture of oranges and semi-tropical fruits, and there are millions of acres which can be bought at nominal prices, equally good and suitable for that purpose as are the best districts of California and Florida.

The opening of the railway through this valley, with cheap transportation to Europe and America, should cause it to become one of the most advantageous fruit-raising countries of Mexico.

The oranges grown near Montemorelos, the first large town after passing Cadereyta, have a reputation for being some of the finest fruit grown in the country. The railway also passes through a country in which a considerable quantity of sugar is grown. At Linares some Chicago capitalists have erected a modern Centrifugal Sugar Refinery, where they are manufacturing pure white

crystallised sugar. The mountains bordering the plain are rich in minerals, and many large mines are being actively worked. Thus northern Mexico, and especially the regions served by the Monterey and Gulf Railway, will be contributing its mineral and agricultural riches, through the new port of Tampico, to European and American ports, resulting in the permanent advancement of Tampico to the position of the principal port of Mexico.

The Monterey and Gulf Railway have determined to become a trans-continental line, and Mazatlan, the largest Mexican city on the Pacific coast, has been decided upon as the western terminus of the line.

THE PORT OF PROGRESO

Is situated in the State of Yucatan, on the Gulf of Mexico. It is an open roadstead, with very little draught of water close in shore, foreign ships being obliged to lie from three to five miles out, and discharge their cargo into lighters. Vessels are exposed to some danger from northerly gales, from October to March. During the remainder of the year the weather is generally fine, but very hot. There is some yellow fever here in the months of July and August, but on the whole, the port cannot be considered very unhealthy. The town has a population of about 5,000, and is situated on a sandy bar, which is separated from the main land by a shallow lagoon, which extends a long way down the coast. The commercial importance of Progreso is due to its being the outlet for the trade of the State of Yucatan. The centre of distribution, however, is at Merida, a well built town of 50,000 inhabitants.

There are two railways connecting the port with this city, from which there are four lines of railway in course of construction to the principal towns of the interior, one of which is intended to be carried as far as

the town of Campeche. The chief articles of export from Progreso are hemp, which is sent to the United States, cordage and hammocks of the same material; dye woods, ox hides, and deer skins, besides a small amount of coined silver, are also exported. Little is known of the mineral resources of this State, and no mines are worked here.

CAMPECHE.

This port is situated on the Gulf of Mexico, and is the capital of the State of the same name. The harbour is a poor one, there being so little depth of water that vessels of 500 tons are obliged to lie nearly three miles from shore. The town has a population of 16,000, and lies at the western extremity of a fertile plain surrounded on three sides by hills. The streets are laid out with great regularity, and the houses are for the most part built of cut stone. There are many fine public buildings, also a foundry, a naval yard, and a prison, which is considered the best on the Yucatan Peninsula. The climate is warm, but not so unhealthy as Vera Cruz. The town of Campeche serves as a distributing centre for the northern part of the State. The State of Campeche is essentially an agricultural one. Sugar cane, rice, tobacco, and Indian corn are grown in considerable quantities, besides some cotton and indigo. Cattle and horse raising is also an industry of some importance. The other occupations of the inhabitants are felling timber and preparing it for export, the extracting of salt, which is shipped to Vera Cruz, the manufacture of white and brown sugar, the distillation of spirits, and the manufacture of cigars, cigarettes, soap, straw hats, tortoiseshell goods, and other articles of minor importance. The principal exports are dye woods, which are shipped to Europe, and cordage, which is sent to the United States and Spain. There are no mines in the State of Campeche.

MATAMORAS

Is situated in the State of Tamaulipas, and is, like most of the Gulf ports, not very healthy. The town has a population of 14,000 inhabitants, and stands on the south bank of the River Rio Grande, about 30 miles from its mouth. In appearance it resembles rather an American than a Mexican town, the better houses being built of brick in the American style; the streets are wide and well laid out, and have many fine public buildings. The commercial importance of Matamoras is principally owing to its being situated in the Free Zone district, which extends along the line of the United States frontier from the Gulf of Mexico to the Pacific Ocean, with a width of 20 kilometres. From its position on the seaboard it has become the distributing centre for the eastern part of the Free Zone, as well as for the neighbouring districts outside its limits, and enjoys a very considerable trade; but since the opening of the railways into the United States, it has lost a considerable amount of its former importance. The northern part of the State of Tamaulipas, surrounding Matamoras, is for the most part an undulating country, well watered with a black, loamy soil, and eminently favourable for agricultural purposes. The inhabitants devote themselves chiefly to the breeding of cattle and horses; some cotton, sugar cane, and maize are grown, but not sufficient for local consumption. Consul Carden says that the neighbourhood is well worth the attention of people wishing to invest in land in Mexico for farming purposes. There are no mineral deposits near the port, but the coal fields of Sabinas about 200 miles inland are being worked on rather a large scale.

FRONTERA

Is situated in the State of Tobasco. The town is between five and six miles from the mouth of the river Grijalva, and has about 4,000 inhabitants. The climate is

warm and damp throughout the year, and is unhealthy. Frontera has little importance of its own, and serves only as a landing place for goods destined for San Juan Bautista, the Capital of the State. There is no harbour here. Owing to the fact that the greater part of the timber exported from Frontera finds a market in London or Liverpool, the trade relations with England are closer than is the case with many other of the Gulf ports. The principal articles exported are mahogany and other cabinet woods, besides ox hides, some fustic, deer skins, tobacco, and caoutchouc. The soil of the State of Tobasco is wonderfully fertile, and is especially favourable for the raising of all kinds of tropical and semi-tropical produce. The cocoa, which is considered of the finest quality, is largely exported to other parts of the Republic. The tobacco is also very highly prized. Besides these, considerable quantities of maize, coffee, rice, and sugar cane are produced. There are no mines known to exist in this State.

POR T OF ISLA DEL CARMEN.

This port, sometimes called Laguna, is situated in the State of Campeche, on the Gulf of Mexico, and is, like Frontera, unhealthy in the summer months. The town has a population of 8,000 inhabitants, and is built on the western end of the Island of Del Carmen, which encloses the large bay known as the Laguna de Terminos. This port owes its importance to the fact that over one-third of all the cabinet and dye woods exported from the Republic are embarked here. Except this, it has little trade to speak of. The district around is very favourable for agriculture. The raising of horned cattle is also carried on to a considerable extent, and a fair amount of sugar is grown, which is for the most part sent to Vera Cruz in coasting vessels.

COATZACOALCOS.

This is intended to be made into a good harbour at the Gulf end of the Tehuantepec Isthmus. It is intended to open this port to navigation by harbour works built on the Eads jetty system, precisely the same as at Tampico, and such is the extent and depth of the River Coatzacoalcos, that the completion of these works will give Mexico another magnificent harbour on the Gulf, in which vessels of all sizes will be able to find the most perfect shelter. The terms of the contract entered into for these works are, that the construction must commence within eight months, and the maximum depth of 26 feet in the channel be obtained within a minimum term of $3\frac{1}{2}$ years, and the whole of the works must be finished and delivered to the Government in $5\frac{1}{2}$ years. The success of this new harbour will depend upon the construction of the Tehuantepec Railway. The conditions for the improvement of the harbour are favourable, as at present there is already from 13 to 15 feet of water over the bar, and the river is a large one. Inside the bar the river has a depth of 40 feet, which extends for an ample distance up the river.



CHAPTER XII.

PACIFIC PORTS.—MAZATLAN.

Mazatlan, in the State of Sinaloa, is at present the principal shipping port on the Pacific, and now ranks next to Vera Cruz in the extent of its trade. Notwithstanding its commercial importance, the harbour is a very indifferent one, and the anchorage, which is not good, is in an open roadstead from one or two miles from the pier, and as even this anchorage is getting yearly more reduced in size, vessels are liable to drag during the heavy swells experienced in the rainy season, unless they have both anchors down. The bar, which has twelve feet of water at high tide, and ten feet at low water, certainly might be removed; a concession for improving the harbour accommodation was granted by the Government some time ago, but nothing has yet been done to carry it into effect. In consequence of being unable to pass the bar, all ships have to discharge into lighters. Mazatlan is, however, the headquarters in the Pacific department of the Navy, and is a port of call of the Pacific Mail and of several other regular steamers. The carrying trade of the port is almost entirely effected in American and German bottoms.

The town is situated on a small peninsula, united to the mainland by an isthmus, and from its commanding position, as well as from the number of well-built houses and public edifices, presents an agreeable and striking appearance from the sea. The population numbers about 15,000; the climate, from the beginning of November to the middle of May, is healthy and agreeable, with a clear

sky and daily sea breezes ; the rest of the year is very hot, with constant heavy rain storms. In 1883, there was a visitation of yellow fever, the first ever known there, which lasted three years, and proved fatal to many new comers. Few, however, of the old residents succumbed to it, although most of them were attacked.

Along the banks of the numerous rivers which run into the sea, the soil is rich, and agriculture is largely practised. Maize, beans, and wheat, of good quality, are raised in considerable quantities, but the cultivation of these is not sufficient for the wants of the population. Coffee and cocoa are grown in small quantities. There are three sugar plantations, producing altogether about 2,500 tons of fine sugar. Cotton is also raised, but it is an uncertain crop. A soap factory is also about to be established for utilising the oil of the coquito nut, which is very abundant in the neighbourhood. The timber industry also gives employment to many. There are three cotton factories in the State, the raw material for which has to be supplied in a great measure from outside. Mazatlan is almost the only place in the Republic which is at the same time a seaport and a centre of distribution, supplying as it does almost all the towns and mining camps in the State of Sinaloa. Since, however, the construction of the Mexican Central Railway, it has lost its original trade of distributing to the States of Sonora, Chihuahua, and Durango.

The mining industry in the southern part of the State of Sinaloa, as well as in the western part of the States of Durango and Chihuahua, is in a very flourishing condition, as these districts are especially rich in minerals. The principal mining centres are Plomosas, Panuco, Copala, San Vicente, and Guadalupe de los Reyes. The ores are for the most part gold, and are found principally in ferru-

ginous quartz; silver is found in the form of sulphides, and is often associated with antimony and arsenic; there is also argentiferous galena and copper pyrites.

A new development and stimulus to the trade of the district has arisen from the advent of American ore buyers from San Francisco. This facility for selling ores has had a marked effect upon the opening of new mines and the promoting of considerable activity in the general trade of the district, as well as upon the export returns from the Port of Mazatlan. About half of the total exports of the ores and concentrates, with two-thirds of the bar silver, and all the dollars and gold are sent to America, the other half of the ores and concentrates being sent to Hamburg, and only about one-third of the bar silver goes to England.

The principal articles imported are: cotton goods, eatables, machinery, and agricultural implements, linen and woollen goods, and iron and steel. A large proportion of the cotton and linen goods come from England, but the bulk of the other articles are from the United States. The principal articles exported are: gold and silver coin and bullion, silver ores, some ox hides, and dyewoods, all of which go to the United States. The value of the exports have averaged £690,581 during the past years.

ACAPULCO.

Acapulco is in the State of Guerrero, and is the most important natural harbour on the Pacific Ocean. This port is said to be the intended terminus of the Inter-Oceanic Railway. Should that line ever be opened, Acapulco would then become important. In olden times it was a busy and prosperous maritime city, from whence those grand old Spanish galleons sailed with their valuable freight, between Manilla and the Mexican coast, sometimes with cargoes to the value of 2,000,000 dols. Calicoes and

muslins, silks, jewels, and spices, were brought in, and silver, cochineal, cocoa, and, as passengers, monks and priests were carried back. Acapulco has a good and well sheltered harbour with smooth water, and vessels can anchor close in shore. The town is picturesquely situated at the foot of a semi-circle of hills, and has a population of about 5,000 to 6,000 inhabitants. The climate is excessively hot and dry, and rather unhealthy. There are ample facilities for coaling, with a fair amount of provisions procurable for shipping, but as the means of communication between the port and neighbouring country is difficult, the trade of the town is unimportant. This place is 285 miles from the capital, and connected with it by telegraph. Steamers of the Pacific Mail Steamship Company which touch there four times a month, afford the best means for postal communication with the West Coast of the United States and Central America. The State of Guerrero, for which Acapulco serves as a distributing centre, has long been known as especially rich in mines, notably those in the district of Tasco. Some cotton is raised for export in this State, but the agricultural products, such as corn, rice, beans, and sugar, are only raised in sufficient quantity for home consumption, and probably owing to the absence of good roads the advantages of this port have not been utilised as they otherwise would have been.

MANZANILLA.

Manzanilla is in the State of Colima, and is situated at the end of a neck of land which juts out almost parallel with the coast, and facing the two great bays of Santiago and Salagua. The water thus enclosed forms a lagoon about forty miles long. The climate is hot and unhealthy, especially in the dry season, which lasts from November to June. In the surrounding hill country, however, the climate is delightful. The anchorage is close in shore, in

from 9 to 10 fathoms of water, and is sheltered from all winds except gales from the W. and S.W., which occur occasionally from June to October. Colima, the capital of the State, is about 60 miles inland, and forms a distributing centre, although of necessity all the import and export trade passes through the port of Manzanilla. The trade of Colima, like that of all the Mexican ports, has decreased of late years, since the opening of the Mexican National Railway system from the City of Mexico to those districts for which Colima was the distributing centre.

There is a large and growing industry in the refining of salt from the lagoons along the shore, the annual yield being estimated at 400,000 dols. There are three large cotton factories in the State, and two large sugar refineries. Manzanilla is connected with the federal telegraph system, and has a daily inland mail, besides a regular fortnightly service of steamers between San Francisco and Panama.

The State of Colima is well watered, and the soil is exceedingly fertile; large quantities of coffee, sugar, rice, tobacco, beans, maize, and cotton are grown in this district, the surplus of which finds a market in the neighbouring States, and but for the difficulty and cost of transport to the sea, there is no doubt that a great deal more would be grown for export to foreign countries. The principal exports are silver (nearly all coined), hides, coffee, and cabinet woods, the value of which has averaged £42,424 for the past five years.

GUAYMAS.

The Port of Guaymas is situated in the State of Sonora, on the Gulf of California. The harbour is well sheltered, and vessels can anchor close to the shore, in four or five fathoms of water. The town contains a population of 4,000 to 5,000 inhabitants, and is built at the head of a bay,

along which are scattered numerous islets. The climate is warm and not unhealthy, the thermometer ranging in the summer from 92° to 98° Fahrenheit, and in winter from 56° to 60°. Fresh provisions are easily obtainable at moderate prices, but ship chandlers' stores are very dear. Guaymas was at one time the principal outlet for trade in the north-west of Mexico, but since the opening of the Sonora Railway, which connects it and Hermosillo with Nogales on the American frontier, Hermosillo has become the actual distributing centre for the State, and Guaymas is now only used as a port of entry for heavy goods, and for mining and other machinery, which is imported from San Francisco. Lighter and more valuable goods are principally brought by rail to Hermosillo.

Since the opening of the Sonora Railway many foreign companies have been formed for working the mines, among which may be mentioned two important English companies, the La Trinidad and the Sonora Silver Mining Company. It is considered that there are in this State nearly 250 mines, and about 32 reduction works, with an estimated capital of over 20,000,000 dols.

It is proposed to connect Guaymas with the coal district of Sonora by a railway, and should this ever be completed, the trade of the port will increase again. The State of Sonora has long been celebrated for the wealth of its mines, and for the great abundance and variety of its minerals, which include the ores of gold, silver, copper, lead, iron, and quicksilver. Some cotton and sugar cane are raised in the middle and southern parts of the State, besides the necessary wheat, Indian corn, beans, and chillies for home consumption; but the agricultural industry is quite subordinate to that of mining.

The value of the exports has averaged £73,318 in the past five years, but by far the greatest part of this is

represented by gold and silver, both coined and in bars, which is shipped to San Francisco. The other exports are hides, which are also sent to the States, and some 2,000 tons of phosphate of lime sent to Europe.

ENSENADA (OR TODAS SANTAS).

There are several harbours or landing places along the Pacific coast of the peninsula of Lower California. Ensenada, the principal one, being on the north, and La Paz on the south-east. The great length of the peninsula, and the difficulty of passing through it, has made it necessary to divide it into two districts for legislative purposes, a Governor being appointed by the Federal authorities to reside in each of the capitals above-named.

The port is known by the name of Todas Santas, from the bay of that name, around which lies pleasantly situated the town of Ensenada, with a population of some 4,000 to 5,000 people. There are some good residences with one or two hotels. A factory has also been established for the canning of fruit, which seems to be doing well, and successfully competes with its American rivals.

The surrounding country belongs to the International Land Company of London. The property has rapidly risen in importance, and it is understood that a number of American colonists have settled there, but as very contradictory reports have been received as to the progress of the enterprise this company has undertaken, it is difficult here to give an accurate report of the company's prospects. The local conditions are favourable to success. The climate is agreeable and healthy throughout the year, the agricultural advantages with irrigation are certainly good, and the facilities of communication with ports in the United States, to provide for the company's produce, are ample, both by sea and land; but

with all the attendant difficulties consequent upon the system of managing such difficult and distant enterprises by London boards, it is greatly to be feared that the ultimate success of this enterprise is problematical.

The breeding of cattle and horses, and the raising of cereals and fruits for the American markets, are now the principal occupations of the inhabitants. The mountainous region near Todas Santas has long been known to be highly metalliferous. Some copper and gold mines have been worked, but as yet little has been done to develop the mining industry.

LA PAZ.

La Paz is situated in the south-east of the territory of Lower California on the Gulf of California. The harbour is large and well sheltered, and vessels can anchor within a mile of the town in five fathoms of water. The shipping is principally American, but there are a number of small vessels flying the Mexican flag engaged in whaling, pearl fishing, and the guano trade which make this their port of call.

The town contains from 6,000 to 7,000 inhabitants, and is built at the southern extremity of the bay of the same name. In spite of the scanty population there, the mining and various marine industries are actively carried on with Mazatlan and San Francisco, as La Paz is a distributing centre for the southern department of the peninsula.

In consequence of the limited rainfall in this part of Lower California, agricultural industries are not important, the principal occupations of the inhabitants being cattle raising and mining.

The mountains of Lower California form an uninterrupted ridge extending along the southern point of the peninsula, up to the American frontier, and are mineral-bearing throughout their entire length. In the neighbour-

hood of La Paz many veins of gold and silver ores and some gold placers are known to exist, some of which are profitably worked by American companies.

About 200 miles to the north are some large copper mines, the property of a French company, and which are doing well, but the mining industry in this part of the country is as yet in its infancy, and offers many inducements to investors, especially as regards the facilities for transport of machinery. (See Consul Carden's report, No. 396.)

SAN LUCAS.

The Port of Cabo de San Lucas, which is situated at the southern extremity of the isthmus of California, has a population of 2,000, but depends almost entirely upon La Paz for its import and export trade. The principal industry of the neighbouring country is cattle farming. The soil is generally fertile, but is too dry for cultivation, except where water is available for irrigation. When this is the case, sugar cane, fruit trees of all kinds, cereals, and cotton are raised, with very good results.

MAGDALENA.

The Port or Bay of Magdalena is situated in the province of Lower California on the Pacific Coast. It has a large and well-sheltered harbour, with good anchorage for vessels of all sizes. The climate is hot and dry, but not unhealthy. It enjoys a certain amount of trade, as being the port of call for whaling ships and others, owing to the excellence of its harbour; but the commerce of the place is of little importance, and is not likely to increase, in view of the sterility of that part of the peninsula, and from the absence of mines in the neighbourhood.

ALTATA.

The Port of Altata in the State of Sinaloa is a town

of 5,000 inhabitants, but its commercial importance is small, as Mazatlan is the port through which most of the merchandise is introduced. The climate for the greater part of the year is hot and dry, consequently very little agricultural produce is raised. Some little distance inland from Altata, the mountains are very rich in minerals, and mining is actively carried on; the ore which exists in most abundance being silver and lead; some gold mines are also being worked. The principal exports are silver ores and dye woods which go to the United States. The goods imported are principally machinery for the mines which come in free of duty, besides some hardware and dry goods.

SAN BLAS.

The Port of San Blas is situated in the territory of Tepic, and at the present time serves as a landing place for goods destined for the thriving little town of Tepic, which contains about 13,000 inhabitants, some 40 miles inland, and is the centre of distribution of this territory. Since, however, the Mexican Central Railway has finished its branch line to Guadalajara, and from the centralising tendency of railway systems for the supplying of purely local requirements, this port has practically ceased to be a distributing centre, and the shopkeepers from many of the neighbouring towns now make their purchases in Guadalajara; and instead of importing annually from Europe, the importing houses at San Blas now receive what little is required for the wants of the immediate locality in small quantities by the steamers from San Francisco. All the machinery required for mining and agricultural purposes is brought from San Francisco, as well as almost all the stores required for mines and factories.

There are four cotton factories: two in the town of San Diego, and two in Tepic, employing a considerable number

of hands, the largest of these being the property of the English firm of Barron, Forbes, and Company.

A bleaching factory has recently been established in Tepic, with an output of 60,000 yards weekly, which, taken in conjunction with another establishment at Guadalajara, is having a very prejudicial effect on the imports of foreign cottons. A factory for making printed goods is also in course of erection, so that before long all this part of the coast will be able to be supplied with home-made goods.

The other principal industries are the manufacture of white and brown sugar and the distillation of spirits.

The territory of Tepic is exceptionally rich in vegetable products, for whilst the forests, which cover the mountains, abound in valuable timber, the lowlands are unequalled for agricultural purposes. The value of the agricultural products is increasing annually, the latest official statistics making them £770,000. There are 1,250,000 head of horned cattle, 12,000 horses and mules, and 228,000 pigs in the territory. All the sugar required for local consumption is produced in this territory, and manufacturers are now shipping it to California with good results. The principal exports are silver ores and bullion, ox hides, tobacco, cabinet woods, rubber, and pepper. The value of the exports have averaged £49,040 during the past five years, besides which very considerable quantities of maize, sugar, tobacco, and other products are sent to other ports along the coast and into the interior. A few silver mines are being worked in the neighbourhood, but none on a large scale, this industry being entirely subordinate in importance to that of agriculture.

PUERTO ANGEL

Is situated in the State of Oaxaca. The town is insignificant, and of small commercial importance, only serving

as a base of supplies for the immediate neighbourhood, as there is only an open roadstead and no anchorage or shelter whatever; sailing vessels frequenting the port run great risks from the W. and S.W. gales. The soil and climate are favourable for all tropical and semi-tropical products, among which may be specially mentioned coffee, cocoa, indigo, sugar, and tobacco; but owing to the broken nature of the country, and consequent high cost of transport, few agricultural products are raised for export. The inhabitants of the district are employed principally in agriculture and cattle breeding, and in the extraction of salt on the sea coast.

SALINA CRUZ.

The Port of Salina Cruz is also situated in the State of Oaxaca, and is destined to become of much greater importance, for both the Tehuantepec and Oaxaca Railways will find their outlets on the Pacific at this point. When these railways have been completed the products of this favoured region, which are coffee, cocoa, indigo, cotton, sugar cane, rice, and india-rubber, will raise this port to one of some considerable importance.

SOCONUSCO (SAN BENITO).

Soconusco, or as it is sometimes called San Benito, is situated on the boundary of Mexico and Guatemala, being insignificant as a town or port, but is of importance only on account of its proximity to Tapachula the chief town of the district, a thriving little place of about 6,000 inhabitants. This part of the State is exceptionally well watered and fertile, though very thinly populated. The principal product is cocoa, which is considered to be the best grown anywhere, and is largely consumed throughout the Republic. The collection of rubber and resinous gums in the forest, and the extraction of salt on the sea coast, affords

also occupation for a large number of inhabitants. Gold and silver mines are supposed to exist in the neighbourhood, but nothing has yet been done to determine their importance.

TONALA.

The Port of Tonala is situated in the south of Chiapas. The town, which is also the chief town of the district is situated about 10 miles from the coast, and has a population of 6,700. Its commercial importance is very limited, and when the Isthmus Railway is completed it will probably cease to be a port of entry. The climate is hot throughout the year. The principal occupation of the inhabitants of this part of the State is the growing of indigo and its preparation for the market, the extraction of salt, and the collection of rubber. The same report in regard to minerals in the district of Soconusco also applies to the district around Tonala.

The principal exports are indigo, rubber, hides, and cabinet woods, their value averaging £17,496 during the past five years.



CHAPTER XIII.

SHIPPING.

Although Mexico is a maritime country, surrounded on two sides out of three by water, yet its people are not, in any sense of the word, a seafaring people. There are few vessels of her nationality, and a portion of those flying the Mexican flag belong in reality to other nations, being naturalised only for the advantage and convenience of their owners. In Lloyd's List there are only 32 vessels, with an aggregate total of 10,254 tons, entered as of Mexican nationality. This is the smallest number set against the name of any civilised country in the world. As a consequence, almost the entire carrying trade of the country is done in foreign bottoms, about 22 per cent. being done by British vessels in 1888, with only 17 per cent. in 1890; American ships taking 50 per cent. of the whole. As the shipping trade of the two coasts is so completely distinct, we will consider them separately under their respective heads.

THE ATLANTIC SHIPPING.

The greatest part of the trade is, of course, carried on on the Atlantic or European side of the coast, *via* Vera Cruz, which at present takes almost the whole amount. Tampico comes in for the next largest share, and promises as soon as the harbour improvements are completed, to become the principal seaport of Mexico, the advantage of this port being, that through freight reaches the capital quicker by this route than by Vera Cruz.

The steamship lines at present running between Europe and Mexico are :—

The West India and Pacific Line, twice a month, from Liverpool to Vera Cruz, *via* New Orleans.

The Harrison Line, fortnightly, from Liverpool to Vera Cruz, Tampico, and Progreso.

The Spanish Transatlantic, weekly from Corunna, Cadiz, and other Spanish ports; Liverpool and Havre, to all principal Mexican ports.

The French Transatlantic, monthly, Liverpool and Havre to Vera Cruz.

The Hamburg American Packet Company touches weekly at Vera Cruz.

The Royal Mail Steam Packet Company, fortnightly from Southampton.

There are two lines in connection with the United States, between New York and all the principal Mexican ports:—

The New York and Cuba Mail Steamship Company (Ward Line) weekly service.

The Southern Pacific Coast (Morgan Line) from Morgan City, Louis, and Galveston and Vera Cruz, fortnightly.

The coasting trade is carried on by six small steamers and a few sailing vessels, all Mexican. They have the monopoly of this branch of shipping, and such monopoly often causes serious inconvenience to merchant traders, who would prefer to send their goods by foreign vessels, rather than lose time and money by the slow transit of coasting steamers.

Mexico is just now following the doubtful policy of her more powerful neighbour, the United States, and is

protecting her national marine, at the expense of the merchants and consumers of the goods carried by her coasting trade.

The Spanish line was subsidised until a few months ago by the Mexican Government, to the extent of \$30,000 per round trip. When the subsidy was withdrawn, the company threatened to take off all their steamers, but, instead of doing this, their boats call at Progreso and Tuxpam, in addition to Vera Cruz, no doubt to their own advantage, as well as to the advantage of the Mexican trade generally.

There are at present several new lines in course of formation. The Mexican International Steamship Company has recently entered into a contract with the Government for a fortnightly trip from Philadelphia, touching at Havanna, Progreso, Campeche, Frontera, Vera Cruz, Tuxpam, and Tampico, and hence to New Orleans, the return trip to be over the same route. It is expected that this means of communication, will materially assist the trade between Cuba and Mexico. This company expects to carry American goods into Mexican ports. They have already been offered the freight of 4,000 barrels of flour for each steamer, besides machinery and products generally of American factories. Coffee, tobacco, raw sugar, Henequen, valuable woods, etc., will form a good return freight into American ports.

Another contract is granted to a Mexican firm for a line between Vera Cruz and Liverpool, to carry the mails. Both these lines have to naturalise their vessels, and in case of war, they are to be fully armed and equipped. They are to be exempted from taxes and Federal dues, and to receive a rebate of 2 per cent. on the Customs duties of all goods they carry which may be liable to duty.

There is an important traffic on the steamers which ply on some of the largest rivers. On the rivers of Tabasco, there are no less than fourteen steamers engaged, and more have lately been ordered from England. A freight boat has recently been built for this trade for the shallow waters, which only draws 8 in. of water with a speed of 12 miles an hour.

Now that the old contract of the Spanish Transatlantic Steamship Company with the Mexican Government has expired, a sum of \$360,000 per annum is available for the purposes of developing the commercial intercourse of Mexico with European countries. It is well, therefore, that the attention of British shipowners should be directed towards the establishment of a suitable Transatlantic steamship line, in accordance with modern ideas of ocean travelling. The question would naturally be asked—will it pay? The answer is provided throughout these pages, for I have endeavoured to show that there will be abundance of freights in the near future to make such a line highly profitable. In regard to passenger traffic, the means of rapid and luxurious transportation to the West Indian Islands, the northern portion of the South American Continent, Central America, and Mexico, which have been hitherto but poorly provided for, with direct steamship communication, would undoubtedly attract passengers.

A new era of commercial activity and enterprise will certainly commence upon the completion of either of the two Isthmus canals, or even of the transcontinental railways already referred to. The immigration of European colonists must assume considerable proportions so soon as the advantages of Mexico are known and understood. It should also be remembered that there are a considerable number of Mexicans who are wealthy, and who not only themselves spend much of their time in Paris, but

who send their children to Europe for purposes of education. The officials of the Government also, are constantly going to and fro. All the best of this trade now goes by way of New York, but the existing trade, which is even now considerable, is nothing in comparison to the European pleasure traffic which might be created were proper facilities provided. It is a well-known fact that the habit of crossing the Atlantic has enormously increased of late years; the "globe-trotting" Englishman, with an eye to business, would soon be found availing himself of these fresh and interesting fields of enterprise. The naturalist, the scientist, or the antiquarian would be equally attracted, for a country so strewn with the ruins of a perished civilisation, with the plateau of perpetual spring, with an Italy of sunny skies, would certainly provide the enquiring traveller with all that his heart could well desire. With similar comforts to those found on the direct New York steamships (adapted to the conditions of the southern climate), this ocean voyage to Mexico and Central America, having almost a certainty of calm and delightful weather, would become a summer excursion in the midst of winter, giving new life to invalids requiring the beneficent and restful influence of a voyage across the South Atlantic Ocean, in strong contrast to the frequent discomforts of a stormy North Atlantic route. Thus a steamship line of suitable tonnage and passenger accommodation would offer to the timid traveller the opportunity to exchange the inclement and dreary winter of these islands, for a region of luxuriant vegetation and of delicious sunshine, affording also an opportunity to the traveller of visiting our own much neglected, but equally delightful, West Indian Colonies.

A little investigation into the records of the Spanish Transatlantic Company would probably show their earn-

ings, independently of their subsidy, to have been extremely satisfactory. The Mexican Government is just now ready and willing to treat, on very advantageous terms, for the establishment of such a line as here indicated, and as the results would be very much of an international character, it is well that such an enterprise should receive at the hands of a mercantile country like England, that consideration which its importance demands.

PACIFIC COAST—SHIPPING.

As nearly all the ports on the Pacific coast are open roadsteads, and unsafe during bad weather; and as the western side of the continent has not yet been fully opened to European and American commercial influence, there is at present but a small shipping trade done on the Pacific coast of Mexico.

The principal carrying trade is done by the Pacific Mail Steamship Company, running from Panama to San Francisco, calling at all the chief ports along the coast.

This company has eight steamships employed in this trade, each varying from 2,000 to 3,000 tons. There are also the ships of the Californian and Mexican Steamship Company, calling between San Francisco and Mexican ports, and the steamers of the Sonora Railway Company, which call at all the smaller ports between Guaymas and Manzanillo. The value of this coasting trade is shown by an item of news taken from *El Financiero Mexicano* :—

“ The steamer *Newbern* now makes San Diego a regular port of call, on her run between Guaymas and San Francisco. Some time ago this steamer was induced to stop at San Diego on a guarantee of \$200 worth of business each trip. The guarantee has not been called for, however, and as a result San Diego is building up a good trade with lower Mexican ports.”

The trade on the Pacific coast is however now only in its infancy, and we may look for some new developments, so soon as the Canadian Pacific Railway Company can see its way to put on a line of good and comfortable steamships, connecting British Columbia with Mexico and Central America, to break the monopoly now held by the Pacific Mail Steamship Company. Those who have had the misfortune to be compelled to travel by some of the inferior vessels of the latter Company, will recognise the need for such additional accommodation.



CHAPTER XIV.

PECULIARITIES OF MEXICAN TRADE.

There is undoubtedly a strong disposition on the part of the Mexican people to become, both politically and commercially, more closely connected with Great Britain and her Colonies. From a desire to advance in the scale of civilisation, the Mexicans are, as a consequence, not slow to acknowledge the wonderful manufacturing genius of the Americans. The better quality of English goods, however, yet retain their reputation there, as elsewhere. English goods are sold so long as they meet the requirements of the trade, but the indifference of British manufacturers to their own interests—an indifference so deeply to be regretted—is in strong contrast to the indomitable energy and tact of both Americans and Germans. Each country's goods are about equal in prime cost, and the expense of placing them upon the market the same. The effort of canvassing and advertising is alone required to obtain business.

At present the machinery and hardware trades are controlled by the Germans and some few Americans. The wholesale and large retail establishments are principally in the hands of French, Germans, and Spaniards. The dry goods and fancy trades are in the hands of the French, and the business of grocery and comestibles is controlled by the Spanish. If, therefore, English manufacturers are

content to leave the distribution of their goods in Mexico to merchants of foreign nationalities, though they may continue to retain a certain share of the trade, it is only a question of time before their competitors will succeed in gaining the trade almost in its entirety.

The conditions of every day life are so different in Mexico from that of any other country, that we must not expect to find their commercial system of payment to be as prompt as that of other trading nations. Time and money has not with them the transcendent importance that it has with us. Both quality and price are often made to give way to the length of credit offered ; therefore, Mexican merchants prefer doing business in Europe where the customs of trade are more liberal, as the American manufacturer either does not realise the importance of long credits, or is unable to do business on that basis.

In every city and town in Mexico of any commercial importance are reputable merchants, with whom British manufacturers can deal direct. Amongst the large importing and mercantile houses, the moral sense is as keen and just as amongst the best commercial people of other nations. There are few business compromises, and still fewer failures, and no merchant will ask for a greater amount of credit than he can readily pay for with his stock in hand.

There are important and thickly-populated cities in Mexico the names of which are almost unknown to Europeans. Some of these are important centres, in which there are Chambers of Commerce having their central organisation in the City of Mexico. In most of these cities there are merchants who may become buyers of

British goods. It is well here to enumerate those having a population exceeding 20,000 :—

Mexico...	...	...	...	...	329,335
Guadalajara	...	...	...	...	95,000
Leon	...	...	...	...	82,000
Puebla...	...	...	...	...	80,000
Zacatecas	...	...	...	...	64,000
San Luis Potosi	...	...	...	...	63,573
Guanajuato	...	...	...	...	63,000
Queretaro	...	...	...	...	48,000
Monterey	...	...	...	...	42,000
Silao	...	...	...	...	38,000
Aguas Calientes	...	...	...	...	35,000
Merida...	...	...	...	...	32,000
Colima...	...	...	...	...	31,000
Celaya...	...	...	...	...	30,000
Oaxaca	...	...	...	...	28,827
Durango	...	...	...	...	28,000
Pachuca	...	...	...	...	25,000
Morelia	...	...	...	...	25,000
Vera Cruz	...	...	...	...	24,000
Irapuato	...	...	...	...	21,311
Lagos ...	...	...	...	...	20,000
Zapotzan	...	...	...	...	20,000

The new Mexican tariff which has just come into operation, covers 900 classes of merchandise. In it there are no *ad valorem* duties, all duties being levied by metric weight, *i.e.*, per kilogram, which is equivalent to 2 and 1-5th pounds avoirdupois. It has hitherto been the custom to charge by gross weight, but in the new tariff, in many cases, legal or net weight is substituted for gross weight (*i.e.*, package and packing).

The free list retains coal, coke, railway, telegraph, telephone, and electric light supplies, barbed wire, iron pipes, sheet tin, Portland cement, explosives for mines, power machinery, boilers and engines, wire cables, ores, cordage, agricultural implements, and a number of other articles. Machinery for agriculture, mines, and arts are free only under certain specified conditions.

Reductions of duty occur upon many drugs and chemicals, firearms, woollen carpets and cloth, underwear clothing, gloves, and fringes. Common glass bottles are reduced from 3 cents to 1 cent per kilogram; common and unfinished furniture from 15 cents to 8 cents; tools from 10 cents to 5 cents; steel ingots from 5 cents to 2 cents; pig iron from 4 cents to 3 cents; bar iron from 5 cents to 4 cents. Iron will be 3 cents; sheet corrugated or galvanised iron 4 cents. Iron beams remain unchanged at 1 cent. Carriages are at 35 cents to 60 cents; unfinished carriages 10 to 30 cents. Cotton cloths, glasses, and porcelain remain unchanged. There are some changes in threads and linen. Sulphuric and muriatic acids, formerly free, will be 3 cents per kilo. Furniture finished is increased from 20 cents to 40 cents per kilo, according to quality.

The tariff presses hardest upon British cottons, upon which, on account of their cheapness, it amounts to about 133 per cent. *ad valorem*, whilst American cottons, which are dearer, pay only about 83 per cent. *ad valorem*. Consul Carden draws attention to the injustice of such duties, and consequent injury to British trade. I have a very strong opinion that the remedy lies very much with the British merchants themselves.

Unfortunately, Spain, after the conquest, pursued a policy of repressing the national industries of Mexico

to prevent interference with the home trade. The present Government of Mexico has, therefore, done its best to foster home manufactures, but from what I have seen of the disposition of the executive authorities towards this country, I feel sure that any efforts of our own to remove these unjust barriers to commercial "reciprocity" would be more successful than we imagine.



CHAPTER XV.

MEXICAN TRADE (EXPORT).

In analysing the existing trade of Mexico, it will be advantageous to state first, the principal products and their value, as exported from Mexico in the years 1887, 1888, 1889, and 1890:—

	1887-88.	1888-89.	1889-90.	1890-91.
Metals	\$31,006,187	\$38,785,274	\$38,621,290	\$36,139,832
Henequen (Hemp)	6,229,459	6,872,592	7,392,244	7,048,556
Woods	1,751,795	1,390,214	1,739,138	1,726,527
Tobacco	830,362	971,885	948,332	1,105,176
Coffee	2,431,025	3,886,034	4,811,000	6,149,808
Various	3,772,610	6,241,295	7,074,255	9,149,412
Skins	1,864,470	2,011,128	1,913,129	1,803,094
 Totals	 \$47,885,908	 \$60,158,423	 \$62,499,388	 \$63,122,405

The following statistics show the growth of Mexican export trade since 1873:—

EXPORTS FROM MEXICO (VALUE).

Years ended 30th June.	Merchandise.	Metals.	Totals.
1873-74 ...	\$6,614,024	\$21,074,679	\$27,688,703
1874-75 ...	7,024,467	20,294,321	27,318,788
1875-78 ...	6,622,223	22,663,438	29,285,661
1878-79 ...	8,362,539	21,528,938	29,891,477
1879-80 ...	10,577,136	22,086,418	33,662,554
1880-81 ...	10,573,994	19,354,704	29,928,698
1881-82 ...	12,019,526	17,063,766	29,083,203
1882-83 ...	12,178,938	29,568,657	41,807,555
1883-84 ...	13,252,213	33,473,283	46,725,496
1884-85 ...	12,896,794	33,774,051	46,670,845
1885-86 ...	13,741,316	29,906,401	43,647,717
1886-87 ...	15,631,427	33,560,502	49,191,929
1887-88 ...	16,879,720	31,006,190	47,885,910
1888-89 ...	21,373,148	38,785,275	60,158,423
1889-90 ...	23,878,098	38,621,290	62,499,388

The great expansion in the volume of exports of produce, having more than doubled during the last ten years, shows to what extent these figures will advance with the greater development of the country.

The improvement in the amount of produce exported since 1887 is largely due to the increased export of coffee (which in 1889-1890 doubled the figures of 1887-1888) and also of Henequen (Hemp) from the State of Yucatan.

The principal products exported from Mexico to Great Britain in the year 1889 were:—

Mahogany...	...	...	...	...	£185,691
Silver ore ...	...	...	...	...	772,551
Hemp and other vegetable substances					25,397
Unrefined sugar ...	...	...	...	...	20,176
Tobacco ...	...	...	...	...	6,128

The next table, in which is included precious metals, indicates the distribution over the various countries to which the several products were exported:—

	1886-87.	1887-88.	1888-89.	1889-90.
United States	\$27,728,715	\$31,059,627	\$40,853,362	\$43,022,440
England ..	13,362,187	10,540,965	12,535,534	13,722,122
France ..	5,112,521	4,474,724	3,496,038	3,159,258
Germany ..	2,175,770	2,177,106	2,061,563	1,693,773
Spain ..	625,293	475,482	659,330	534,057
Other Countries	187,444	175,645	552,596	367,738
Total ..	\$49,191,930	\$48,903,549	\$60,158,423	\$62,499,388
	£7,453,322	£7,406,955	£9,122,565	£9,477,553

The analysis of these figures is instructive. It shows that the export trade with the United States has a strong tendency to increase, whilst it is diminishing to the rest of the world, the American trade having almost doubled in three years, it now being 70 per cent. of the whole. The value taken by the United States is \$43,000,000, against \$13,000,000 shipped to England, which takes only 20 per cent. of the total exports.

The actual and increasing amount of the export trade of Mexico, in its present undeveloped condition, will be more easily recognised, by making a comparison of ten years' growth, with countries like the Argentine, Chili, and Uruguay. The value of their exports is shown as follows:—

	1879-80.	1889-90.
Argentine ...	£9,872,000	£24,563,000
Chili (general) ...	9,131,000	14,325,000
Chili (special) ...	8,887,000	13,742,000
Uruguay ...	3,468,000	5,407,000
Mexico (general)...	1,603,946	3,620,915
Mexico (minerals)	3,349,221	6,856,609

The total exports of Mexican produce, without minerals, in 1879-80 was valued at \$10,577,136, or £1,603,946, and the latest returns give the exports of 1889-90 at \$23,878,098, or £3,620,915.

Shipments of precious metals at the same time have been raised from \$22,086,418, or £3,349,221, in 1879-80, to \$38,621,290, or £6,856,609, in 1889-90, although the price of silver has declined from 51d.-53d. in 1880-81 to about 39d. in 1891.

The total exports of Mexico to-day represent about \$5½ per head of the population, which would have been greater but for the fall in the price of silver.

The statistical figures already given were appended to the Consul's very important report, with valuable recommendations, which recommendations are printed in the concluding chapter.

This comparison of the growth of our own trade with Mexico, with that of our rivals, suggests a reference to the Board of Trade Returns. These show unmistakably that British trade is greatly in need of new markets.

The exports from Great Britain for the last few months of the year 1891 are materially worse than the same months in 1890, and are not even so good as in 1889. Every important industry, especially those of cotton, iron, and woollens and worsted have suffered, the one notable exception being coal, which has increased both in quantity and value.

In concluding this portion of our subject, a comparison of the ten years' consumption of British produce and manufactures, per head of the population in Mexico, with that of a country of rapid growth like the Argentine, is instructive, the total populations being taken from the latest published figures in each case :—

		MEXICO.		ARGENTINE REPUBLIC.
1880	...	£.13	...	£.81
1881	...	.17	...	1.10
1882	...	.19	...	1.38
1883	...	.16	...	1.62
1884	...	.11	...	1.92
1885	...	.08	...	1.22
1886	...	.09	...	1.73
1887	...	.10	...	2.08
1888	...	.12	...	2.21
1889	...	.13	...	3.56

The abundance and richness of Mexico, with the almost certain prospect in the immediate future of a phenomenally rapid development, would indicate that with greater advantages and more permanent conditions, the consumption of British produce and manufactures in that country, will, in the near future, considerably exceed that of the Argentine.

This sanguine expectation seems justified, as the above figures show that this consumption is less in Mexico than in any other part of the world, except in Austria-Hungary,

Japan, and Russia ; but however insignificant this consumption of British manufactures may be in Mexico, it is instructive to note the fact that it is six times more there than in Austria-Hungary, and nearly double that of Russia and Japan.

Amongst all the other countries there are none where the increase has been so rapid as in the Argentine, a country which, when placed in comparison with Mexico, furnishes many reasons for a preference for the latter.

The steady and increasing growth during the last ten years of the trade of the Argentine suggests that, in the next decade, Mexico will also accomplish similarly improving conditions.

If the trade in British manufactures increased in the same proportion as in the Argentine, the additional imports would represent the enormous sum of over £41,000,000, which would materially help the declining and unsatisfactory statistics of the Board of Trade already referred to. To effect this, there is nothing wanted but a revived interest, and an intelligent prosecution of trade in Mexico.



CHAPTER XVI.

MEXICAN IMPORT TRADE.

It is difficult to give, with exactness, the total imports into Mexico, as the statistics in so many cases disagree. It has, therefore, been only possible to give an approximate idea of the conditions of the Mexican import trade.

The largest share of European imports must of necessity have passed through the Custom House of Vera Cruz. Consul Carden states that in 1887, 66 per cent., and in 1888, $63\frac{1}{2}$ per cent. of the total imports were entered at that port, but as most of the goods from the United States enter by way of the northern frontier through the Custom Houses of Paso del Norte, Piedras Negras, and N. Laredo, only about one-fourth of the total imports from the United States pass through the Vera Cruz Custom House.

In consequence, however, of the Free Zone along the 1,700 miles of its northern frontier, and of the high tariff and consequent smuggling from America, the receipts of the Vera Cruz Custom House, and to some extent also the interests of British importations, are affected. There was an increase in its receipts of £60,963 in the year 1888 over 1887, and a further increase of £214,336 in 1889 over 1888, so that, in common with the rest of the country, the trade of Vera Cruz is said to be progressing with leaps and bounds.

It is satisfactory to note that the imports from England for the year 1889 improved 76 per cent., but this enormous increase resulted in a great measure from the large importations of railway material, machinery, coal, etc.

From the *Statesman's Year Book* the imports from Great Britain into the Mexican ports are given thus:—

1885.	1886.	1887.	1888.	1889.
£796,011	£900,699	£1,106,607	£1,257,969	£1,512,756

The following table shows the total amounts imported into Vera Cruz from foreign countries during the years 1888-89:—

COUNTRY.	IMPORTS, 1889.	IMPORTS, 1888.
Great Britain ..	£1,535,355	£869,678
United States ..	454,470	440,374
Germany ..	298,370	290,149
France ..	488,301	482,484
Spain ..	257,760	267,720
Other Countries ..	146,102	158,134
Total ..	£3,180,358	£2,508,539

The latest instructive returns I can obtain are those in which Consul Carden gives the principal articles of import into Vera Cruz and the proportion imported from the various countries in the year 1888:—

ARTICLES,	ENGLAND.	U.S.A.	GERMANY.	FRANCE.	SPAIN.	OTHER COUNTRIES.	TOTAL.
Raw cotton ..	—	£79,430	—	—	—	—	£79,430
Cotton goods ..	£338,043	26,649	£22,821	£35,028	£500	£8,676	£31,717
Linens ..	48,357	10,566	5,230	4,102	198	1,126	69,579
Woollens ..	48,278	20,683	41,363	75,511	175	8,165	194,175
Silks ..	5,887	5,628	20,064	79,843	485	5,735	117,642
Provisions ..	21,060	57,600	27,330	70,500	119,650	48,850	344,990
Glass and stoneware ..	2,420	9,090	8,970	6,670	400	2,850	30,400
Hardware ..	37,545	56,800	42,600	33,666	220	3,973	174,804
Metals ..	118,475	17,156	17,500	8,496	49	1,379	163,955
Machinery ..	75,092	45,878	7,974	12,843	386	10,675	153,848
Paper ..	13,240	31,940	47,040	44,440	40,480	11,200	187,440
Drugs etc. ..	18,513	33,262	13,860	27,870	200	1,300	95,005
Caoutchouc ..	18,325	1,446	413	475	—	—	20,659
Coal, including freight ..	57,988	—	—	—	—	—	57,988
Quicksilver ..	42,951	10,118	—	—	32,315	—	85,384
Miscellaneous ..	23,594	35,028	34,984	83,040	72,662	54,205	393,423
Total	£869,678	£440,374	£290,149	£482,484	£267,720	£158,134	£2,508,539

The comparison of those goods imported into the port of Vera Cruz alone, for the years 1888 and 1889 shows clearly the improvement in British trade with that port:—

ARTICLES.		1888.		1889.
Cotton goods	...	... £338,043	...	£508,815
Linens	...	... 48,357	...	68,139
Woollens	...	... 48,278	...	73,660
Silks	...	... 5,887	...	9,922
Provisions	...	... 21,060	...	17,344
Glass and stoneware	...	... 2,420	...	3,515
Hardware	...	... 37,545	...	47,197
Metals (including raw material)	...	... 118,475	...	369,088
Machinery	...	... 75,092	...	145,598
Paper	...	... 13,240	...	5,362
Drugs, etc.	...	... 18,513	...	13,650
Caoutchouc	...	... 18,325	...	18,572
Coal (including freight)		57,988	...	79,012
Quicksilver	...	... 42,951	...	50,605
Miscellaneous	...	... 23,504	...	125,876
		—	—	—
Total	...	... £869,678	...	£1,535,355

In order that the increased imports from Great Britain already referred to may not be too highly estimated by those interested in the proper expansion of our trade, Consul Carden has given, in his report to the Committee on Depression of Trade, a comparison of the averages of the last five years, with the preceding fifteen, between the English and American imports into Mexico.

EXPORTS OF BRITISH GOODS TO MEXICO.

Comparison of the average of the last five years with the preceding fifteen:—

ARTICLES EXPORTED.	Average Fifteen Years.	Average Five Years.	Increase per cent.
Cotton piece goods	£523,353	£551,743	5
Linen piece goods	106,502	83,049	22
Woollen piece goods	44,703	85,186	90
Iron and steel	66,519	292,104	339
Hardware and cutlery	29,275	40,554	38
Machinery and millwork	45,074	125,977	179
Other articles	148,854	274,285	84
 Total	£964,278	£1,452,898	50

VALUE OF AMERICAN EXPORTS TO MEXICO.

Comparison of the same average of the last five years with the preceding fifteen:—

ARTICLES EXPORTED.	Average Fifteen Years.	Average Five Years.	Increase per cent.
Cotton manufactures	\$549,585	\$912,112	63
Chemicals, drugs, etc.	103,612	234,288	126
Glass and glassware	30,020	100,916	236
Iron and steel	887,915	2,841,070	219
Explosives	89,392	306,314	242
Provisions	175,671	279,583	59
Leather	91,942	121,042	31
Wood	197,324	927,844	370
Quicksilver	321,587	307,323	4
Other articles	2,135,185	5,040,263	136
 Total	\$4,582,233	\$11,070,755	141

CHAPTER XVII.

OUR COMPETITORS.

It is necessary to state a few facts regarding our commercial rivals in Mexico. Although France to-day supplies a greater bulk of merchandise, the rivalry of the Germans, by reason of their successes elsewhere, seems to require our first consideration.

They began years ago to study, with characteristic patience and persistency, the conditions of trade in Mexico: they have learned the kind of goods wanted, how they should be invoiced, how shipped, and how they would be paid for. After years of such work of steady advancement they have been able to secure the bulk of the Mexican trade. They have become rich, and have large general stores, containing almost every class of goods, for which there is a constant demand, and which are kept supplied from branch houses in Germany. Their goods are popular because of their cheapness, which suits a people just emerging from the most primitive conditions, the majority of whom have not yet learnt to discriminate qualities.

Another very important factor in securing Mexican trade is that the Germans have cultivated the system of exchanging product for product. The Mexicans desire to realise their produce, and Hamburg has become by this means a market for Mexican produce, which has been most profitably re-exported to other countries. This system of exchange gives profit, and removes the difficulties of the long credits and risks, so constantly thought of, and so often exaggerated by English manufacturers.

The German is also a good linguist, speaking at least three languages. His industry is untiring ; he is always at work ; is active in discovering wants, and is ready to supply them promptly. All this is in direct contrast to the British, who desire to conduct their business on their own conservative lines, however unsuitable they may be to the country with which they are trading. Further than this, they are slow in executing orders when they have the good fortune to receive them.

AMERICAN ACTIVITY.

Our friends the Americans, considering their exceptional advantages of communications and proximity, are really accomplishing less in proportion to their advantages than we are. Their untiring activity in all branches of trade should give them almost a monopoly in Mexico. It is almost impossible to explain to those who are unacquainted with their ingenious methods of securing and pushing trade, how much their enterprise is in advance of our own.

Three newspapers in the interests of American trade are published in the City of Mexico alone, and the almost sole and constant editorial comments seem to be, to show up the great and lasting advantages to arise from a reciprocal trade with America. The general Press, too, in America, is continually harping upon the same string, with this important addition, however : that European influence in Mexico is year by year growing less important. In several of the manufacturing centres of America there are established Spanish clubs, where is strongly advocated reciprocity with Mexico, and with other Spanish-speaking countries of Central and South America. In these clubs the Spanish language is taught, so that the American of the future may find it less difficult to carry out commercial

operations in those foreign centres, than has been the case with him in the past. All this points to the continued activity and watchfulness of the trading community of America, and one of the leading features of the McKinley Tariff Act has been, not only to interfere with and to limit the importation of European goods, but to encourage trade with the South American Republics.

For this reason the Pan-American Conference at Washington was instituted, it being fondly hoped that reciprocal treaties would result from the magnificent reception and treatment given to its delegates. The American Press was enthusiastic as to the prospects of a great South American Commercial Union, but from the latest reports, the anticipated results have not been eminently satisfactory. However, as railways and other means of communication, and facilities for trade between the United States and Mexico, go on increasing, the possibilities of reciprocal trade between these two countries thus territorially joined together must likewise increase, with a corresponding disadvantage to the prospects of British trade.

The American Minister in Mexico is active in assisting the interests of his countrymen, and representatives from American houses are frequently seen in Mexico, for the more practical objects of opening out trade. These missionaries of commerce, however, do not always leave behind them favourable impressions, as they fail to adapt themselves to local conditions, and are wanting in that natural politeness which is so eminently a characteristic with all classes of people in Mexico.

Their efforts, too, may not be so successful, on account of the memories of the last American "War of spoliation," as it was called, by which the Mexicans lost fully one-half of their territory.

The principles of the "Monroe Doctrine," by which the United States virtually assumes a protectorate over Mexico, is not fully appreciated by so sensitive a people as the Mexicans.

For these reasons, therefore, it may be affirmed that the Mexican people are not so ready to become commercially allied with their neighbours the Americans, as with Europeans.

If, therefore, it is possible to awaken the attention of our own countrymen to the obvious commercial advantages to be obtained by making more active and intelligent efforts to secure the Mexican trade, the statistics of the next five years will be of an entirely different nature from those given in a former chapter.

CANADIAN AND BELGIAN ACTIVITY.

The Mexican Government are now negotiating with the Canadian Government for a reciprocity treaty of commerce. They have made an offer to Canada to grant a subsidy, if the Canadians will do the same, for a steamship line between St. John, N.S., and the Gulf ports. The Canadian Government have expressed their willingness to do this, and from what I have been given to understand, they purpose also making an appropriation of a sum sufficient to maintain in the City of Mexico a commercial agency for the purpose of looking after the interests of Canadian manufacturers. There is great necessity for this. An active propaganda on the spot is the only plan possible to produce important results. Of all European nations the Belgians alone appreciate this fact. They have such an agency in the City of Mexico, which I am told is very successful.

NEGLECT OF BRITISH INTERESTS.

It is an extraordinary thing that British interests are entirely neglected. There is no British trade in Mexico of

any importance, nor is there any effort made to obtain it. I am justified in stating that at the present moment there is no part of the world, where, with little effort, a more satisfactory trade could be opened out, and with better results, than in Mexico. There is no one who regrets the inactivity of the English commercial classes and manufacturers more than the British Minister, Sir Spenser St. John. It is pleasing to state that of all the foreign Ministers in the City of Mexico there is no one more respected by the Mexican Government than the representative of Great Britain, and he is considered in Mexico to be the most trusted friend of the President and his Ministers.

If there were anyone to attend to the commercial interests of Great Britain, the Mexican Government might be induced to extend to Great Britain the reciprocal trade facilities which the Americans are so anxious to obtain, as the advantages of Free Trade are more appreciated by the Mexicans themselves than any of the high tariff nations.



CHAPTER XVIII.

FINANCIAL POSITION.

The foregoing analysis of exports and imports indicates clearly the steadily increasing trade and consequent general prosperity of the country, so that it is not surprising to find a corresponding development and improvement in its financial position.

Instead of imports being greatly in excess of exports, which is generally the cause of weakness in other countries, the balance of trade in Mexico has been greatly in favour of her exports.

The first result of the growth of trade is shown in the increased income of the public exchequer, which is estimated at \$41,400,000 for the current fiscal year. The previous year's revenue is as under:—

REVENUE OF MEXICO.

Year ended 30 June.	Import and export duties.	Interior taxes stamps, etc.	Sundries, post office, lands, etc.	Total.
1887	18,021,787	11,211,116	2,068,237	31,301,130
1888	19,657,740	11,726,510	2,486,826	33,871,076
1889	19,711,192	11,964,590	2,511,545	34,187,127
1890	22,939,229	12,938,811	2,568,613	38,446,693
*1891	23,800,000	13,500,000	3,200,000	40,500,000
*1892	25,600,000	13,100,000	3,400,000	41,100,000

^o Estimated.

The great increase in the revenue shown between 1887 and 1891 is very satisfactory, as it is now amply sufficient to cover liabilities of the country of all kinds.

The details of expenditure are given as under :—

EXPENDITURE OF MEXICO.

		1890-1.	1891-2.
Legislature	...	\$1,009,037	\$1,054,037
Executive	...	49,977	49,849
Judicial	...	489,884	468,884
Foreign affairs	...	538,286	448,810
Interior	...	3,734,636	5,557,552
Justice	...	1,440,668	1,387,070
Public works	...	3,662,871	6,750,427
Finance	...	14,312,782	11,350,268
War	...	12,657,853	12,627,342
		<hr/>	<hr/>
		37,874,994	37,722,139
Exchange loss	...	2,244,942	2,244,912
		<hr/>	<hr/>
		\$40,119,936	\$39,967,051

Under the item Finance are all the charges of this department for the year 1890-1, which includes interest on the foreign loans amounting to \$14,312,782, and with the loss on exchange of \$2,244,942, makes a total expenditure in that department of \$16,557,724.

In estimating this item, the annual subvention of \$1,143,750 to the Mexican National and Interoceanic Railways are usually added to the expenditure under the head of finance, but this is an error, as this railway subvention is included under the head of Public Works.

The proportion of the total finance item, which is \$16,557,724, as against the total amount of exports for the year, \$63,122,405, is significant of the present undoubtedly strong financial position of the country.

The total amount of the public debt of Mexico, including internal debt and obligations of all kinds, amounts to about £22,720,000.

Therefore, the commercial strength of Mexico is illustrated by a comparison of the public debt of Mexico in relation to its population with that of the Argentine and Chili. Although both these countries are undoubtedly rich, the undeveloped wealth of Mexico lends additional force to the following comparison :—

	Population.	Public Debt.	Per Head.
Mexico ...	... 12,000,000	\$22,720,000	\$1.89
The Argentine ...	4,086,492	20,380,529	4.98
Chili ...	2,715,400	15,602,975	5.70

These figures, taken with the fact of the prompt payments by the Government of all their obligations, with the increasing ability and undoubted progress in effecting economies, should sufficiently demonstrate that the financial future of Mexico is as important as it is satisfactory.

Finally, in relation to the present taxation in Mexico, it is the opinion and practical experience of those living in that country that it is one of the most lightly taxed countries in the world.

This fact is as perfectly well known by the present Finance Minister, Senor Gomez Farias, as it was by the late Senor Dublan, but only at the proper time, and not till then, will any change be made in the present system of exempting the great landowners from taxation.

The motives for such an increase of taxation will be far-reaching and have an important influence on the country generally.

Its effects upon revenue would, of course, be very important, and open the way to many reforms, for nearly all the country is held by a few landowners, in all, perhaps, not more than 6,000, many of the estates being over 1,000,000 acres in extent. It will readily be understood that if such landowners, who now are almost freed from taxation, were

compelled to sell their large holdings for subdivision into smaller estates, some of the finest lands in the country would be placed under cultivation.

There are at present serious difficulties standing in the way of such a reform—there is the sparsity of population, the want of a market for the land now unutilised, and the entire absence of foreign capital seeking investment, which in other countries has been so freely introduced; but none the less, is the question of the ability of the country to bear increased taxation one of great importance, and one which probably in the near future may have a serious bearing upon the finances of Mexico.

THE MEXICAN NATIONAL CONSOLIDATED DEBT.

In the year 1851, during a short period of public peace, the Mexican Government undertook the conversion and consolidation of its foreign indebtedness, and to that effect they negotiated through Messrs. Baring Brothers, of London, a loan of £10,500,000, bearing interest at the rate of 3 per cent. per annum.

In the following year, 1852, new political convulsions, with consequent changes of Governments, made the further payment of the regular interest impossible, and was from that time suspended, as from 1853 to 1857 a series of military mutinies and revolts, instigated by the clergy, took place, and kept the country in a condition of complete anarchy.

In the last-named year, the present national constitution was promulgated, from which time commenced that period of civil war, commonly known as the “War of Reform,” or the “Three Years’ War.” This was ended by European intervention in Mexican affairs, and by the subsequent invasion of the country by a French army and the establishment of the Empire of Maximilian, which was overthrown by the Mexicans in June of 1867.

From 1867 to the end of 1876 both the Presidents, Juraez and Leado, were each in turn wholly absorbed by the pressing necessity of reconstructing the public administration of the country, and were entirely prevented from giving any attention to the question of the nation's public debt.

During General Diaz's first period of administration, which was inaugurated in May, 1877, and that of his successor General Manuel Gonzales, which ended in December, 1884, various fruitless negotiations were initiated for the Government's acknowledgment and consolidation of the foreign debt, until then commonly denominated "The English Debt;" but it was not until June, 1885, that General Diaz, seconded by his Secretary of Finance, Senor Don Manuel Dublan, boldly proclaimed that acknowledgement, and established the basis for a consolidation of both the foreign and internal debt of the Republic.

By a law then passed by the Mexican Congress £10,500,000 of the 1851 Loan, and a certain portion of the accrued interest was legally acknowledged and subsequently consolidated through the issue of bonds to the amount of £15,000,000, bearing interest at certain fixed rates.

Under one of the conditions of the above law, the Mexican Government reserved to itself the option of redeeming the above issue, on or before the month of July, 1890, to the amount of 40 per cent. of its nominal value, amounting to about £6,000,000.

The law of the 22nd of June, 1885, with its various conditions for the acknowledgment of the debt, was in time fully approved by the nation's foreign creditors, as represented by the Council of Mexican Bondholders in London, and with the product of the new loan of £10,500,000, which was negotiated in 1888, in London, Berlin, and

Amsterdam by Messrs. Antony Gibbs and Co., S. Bleichroeder, and Lipmann, Rosenthal, and Co., the redemption of the £15,000,000 issue of 1885 was thereby effected.

The surplus amount of this loan, beyond the amount of the redemption effected, was applied in the payment of a considerable portion of the Government's floating debt, and in the discharge of some encumbrances on sundry national landed properties.

The annual indebtedness of the Government on account of subsidies due to the four principal railway companies, in conformity with its existing agreements, made an annual charge of nearly £5,500,000, absorbing about 23 per cent of the average Customs receipts of about £24,000,000.

In order to relieve the burden of this heavy fixed charge on the public revenue, the Government was authorised by Congress to pay the railway companies the total amount of their subsidies, and to contract a fresh loan of £6,000,000 for that purpose. This loan was negotiated in 1890 by Messrs. S. Bleichroeder, of Berlin, and is represented by authorised certificates of the Government upon their agency in London.

Summed up, the Mexican foreign debt consists now of:—

(a) The 1888 Loan, for £10,500,000, bearing interest of six per cent. per annum, which was placed, one-third at 70 and two-thirds at 86½.

(b) The 1890 Loan, for £6,000,000, placed at 88 $\frac{3}{4}$.

Both the said loans, now called the Mexican Sixes, are now quoted at about 82, after having attained last year a maximum quotation of 100 $\frac{1}{2}$ and a fraction per cent.

The present depressed condition of these securities is no doubt produced by a sympathy with the financial condition of the South American Republics.

INTERNAL DEBT.

The Internal Debt of Mexico has been gradually consolidated in conformity with the law of the 22nd June, 1885, through the issue of Government Bonds, bearing interest of 3 per cent., both capital and interest being payable in Mexican currency.

According to another law, dated the 27th of May, 1889, whereby an extension of time was granted to public creditors for the presentation of their claims, another issue of bonds was authorised, bearing interest at 3 per cent. to the 1st of July, 1894.

The total amount of both issues of the Internal Loan of December, 1890, up to the 31st instant, was \$36,923,779, of which about \$4,000,000 corresponds to the issue authorised by the last-named law of 1889.

The bonds of the 1889 issue are now quoted in the City of Mexico at between 38 and 40 per cent. of their face value, and in London, according to the last quotations, they were quoted at about 33 per cent. of their sterling equivalent.

CONSOLIDATION.

The project of consolidating the whole Mexican Debt, both foreign and internal, into one single issue of new securities, bearing a uniform rate of interest of probably 4½ or 5 per cent., has been of late very much talked about, and has undoubtedly been for some time under the Government's consideration.

Should this project of conversion be consummated, it is well to state that the total amount of the two foreign loans is £16,500,000, which, valued at say 91, would represent £15,015,000.

The amount of the Internal Consolidated Debt is about \$32,923,779 (paying 3 per cent. and now valued at 39), and about \$4,000,000 which will not earn interest

until 1894 (and now only worth in the City of Mexico about 23 per cent. of its nominal value); these two items together may be estimated at \$13,760,273 in Mexican currency. Reduced to sterling at the present rate of exchange on London of 39 pence per dollar, this would represent a total of £2,231,870 as the total internal debt, which, added to the amount of the foreign debt, would make the grand total Mexican indebtedness about £17,246,070, as being the actual amount to be converted, in the event of such a project ever being carried into effect.



*CHAPTER XIX.**COINAGE AND BANKING.*

COINAGE.

Until the year 1880 Mexico conducted its exchange almost exclusively by means of a monometallic silver currency, no other form of money, with the exception of a small copper coinage, having been used or recognised. This, of course, placed considerable and serious difficulties to the carrying out of financial transactions, for in receiving or making a payment of only a hundred dols. the weight of $5\frac{1}{2}$ lb. became an important consideration, and where collections or payments were large, and the distance to be travelled considerable, it necessitated, in order to provide against the clear temptation to robbery, a regular and permanent organisation of fully equipped and armed men, both foot and horse, to secure the safer carrying out of the money transactions, not only of the Government, but of banks, railways, merchants, and of other business establishments. All promises for the payment of notes, bonds, mortgages, etc., were drawn up with the invariable provision, "payable in hard dollars, to the exclusion of all paper money, either existing or to be hereafter created," the only bank notes issued at that date being those of the "Bank of London, Mexico, and South America," a branch of which unchartered bank having been established in Mexico in 1864. As the circulation of this bank was extremely limited, small traders of that day, and the people generally, declined to accept their notes.

The principal coinage in Mexico is of silver, the monetary unit being the peso (dollar).

There were formerly coined also, in copper, the cuartilla, equal to about three and one-third cents, the tlaco, one and nine-sixteenth cents, and the centavo, one cent.

In the shops, and among the larger part of the population, in naming prices, the old system is still in vogue, and the real is used as the unit. Pieces of 50 and 25 cents are not known as cincuenta and vintecinco centavos, but as cuatro (4) reales and dos (2) reales. These pieces are also called toston and peseta respectively. A dollar and a quarter is spoken of in Mexico as diez (10) reales, 2 dols. 50 cents as viente (20) reales. The silver peso still continues to be struck with the legend "8R," meaning 8 reales.

The amount of money annually coined in Mexico is about 25,000,000 dols. This consisted last year of—silver 24,237,449 dols., gold 308,083 dols., copper 208,869 dols.; total 24,754,461 dols.

The rate of exchange for the years 1886-7 was 6.00 dols. to the pound sterling, but since that date it has been at 6.50 dols.

Some years ago a metric system of coinage was adopted, and is now in official use; 5 and 10 cent silver pieces were coined, some of which are still in circulation.

The metric system is used in the computing of Customs and other Government duties, as well as in the measurement of public lands; it is also used in all railroad and freight transactions, and is exclusively taught in the public schools.

The gold circulation of Mexico is comparatively small, but the Mexican Government has at present under consideration a plan for the revision of the monetary laws and coinage. This plan, as recently submitted to the

Congress, called for a system of gold, copper, and bronze coins of new designs, slightly differing in value from those now in use.

BANKS.

The Government has been wise in granting a number of charters for the establishment of banks in various towns of the Republic; until 1889 banking was mainly confined to two institutions and their branches, the Bank of London and Mexico, established in 1864, and the Mexican National Bank (whose agents in London are Messrs. Glyn, Mills, Currie, and Co.), which received its charter in 1881, and became the National Bank of Mexico through an amended charter in 1884.

Both of these banks have their head offices in the City of Mexico, and have many branches in various parts of the Republic. Owing to good management they have a large and paying business, and have acquired a firm footing in the country.

The next bank of importance is the International and Mortgage Bank of Mexico, founded under agreement dated September 4th, 1888, to acquire the late Banco Hipotecario Mexicano, under the concession granted to the latter institution dated April 24th, 1882, and August 31st, 1888. Its capital is \$5,000,000, held principally in America, and its agents are Messrs. H. B. Hollings and Co., of New York, and Messrs. Samuel Montague and Co., of London. This bank is empowered to carry on all the usual banking operations, and is authorised to issue certificates of deposit for silver and gold, coined or in bars, payable on demand in Mexican dollars, and as this privilege is an important one in a silver-producing country like Mexico, these certificates have acquired a wide circulation. From time to time various other banks have been founded, all of which are in a flourishing condition.

The present existing banks, with their total assets and note circulation, are shown by the following returns for the month of September, 1891. These naturally vary considerably, but show the extent of their business and their present relative standing:—

Bank.	Total Assets. Dols.	Bank Note Circulation. Dols.
National Bank	56,379,503	15,215,484
Bank of London and Mexico ...	18,422,259	6,806,510
International Mortgage Bank...	7,229,647	876,700
Mining Bank of Chihuahua ...	1,705,243	392,989
Mexican Bank of Chihuahua ...	1,511,383	185,826
Yucatan Bank	1,494,214	549,395
Mercantile Bank of Yucatan ...	1,030,631	357,805
Commercial Bank of Chihuahua	898,620	179,694
Bank of Chihuahua	722,803	154,616
Bank of Durango	715,453	111,160
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	\$90,109,756	\$24,870,179

It has been stated that the amount of fiduciary circulation is so large that Mexico is in danger of following in the footsteps of the Argentine Republic, of which country the present situation is as follows:—

	Population.	Fiduciary Circulation.	Per Capita.
Argentine	3,500,000	\$400,000,000	\$114.28

This can best be refuted by comparison with the circulation of other countries.

	Population.	Fiduciary Circulation.	Per Capita.	Coin.	Per Capita.
England ..	38,165,000	\$190,000,000	\$4.96	\$650,000,000	\$17.03
France ..	38,250,000	584,806,000	10.52	1,600,000,000	41.80
United States	64,000,000	938,728,555	14.66	491,905,914	7.68
Germany ..	48,000,000	275,000,000	5.72	715,000,000	14.89
Mexico ..	11,000,000	24,870,179	2.26	100,000,000	10.00

But, to put the matter in a more concrete form, we have the following ratio per capita.

	Coin.	Paper.	Total.
France	... \$41.80	\$15.52	\$57.32
England	... 17.03	4.96	21.99
Germany	... 14.89	5.72	20.61
United States	7.68	14.66	22.34
Mexico	... 10.00	4.25	12.25

These computations show conclusively that Mexico is much below the average, in its circulation, both in coin and paper money, of the other nations of the world; indeed, the expanding commerce of Mexico has entirely outgrown its monetary circulation, demanding still more additional banking facilities.

A comparison between the actual present requirements, and the existing bank circulation and coinage, shows an extraordinary deficiency in these facilities. In fact, it shows the smallest proportion of monetary circulation to any other commercial country in the world, in regard to its population.

The available monetary resources of the country may be summed up as follows:—

Metallic stock in the banks	...	...	24,000,000 dols.
Bank notes in circulation	...	...	25,000,000 ,,
Amount of silver coin in circulation			36,000,000 ,,
			<u>85,000,000 dols.</u>

Taking the total population of the Republic as 12,000,000, this will give only about 7 dols. per head, as available for each inhabitant.

As perhaps 65 per cent. of the population belong to the Indian class, for whom banking facilities have little use, and excluding entirely these 8,000,000 from the calculation, there remain, say, a little over 4,000,000 people, for

whom the important operations of deposit accounts, bill discounting, borrowing or lending, purchase, or sale of exchange may be considered necessary. The proportion of the present coinage and paper issue for this 4,000,000 only shows about 24 dols. per head.

The amount of internal trade, on a rough estimate of the general consumption of all classes of the community in one year, may be calculated at .. 1,500,000,000 dols.

Amount of foreign trade at 120,000,000 ,

Making a total national trade of .. 1,620,000,000 ,

The total monetary resources of the country being only about 85,000,000 dols., would represent only a little over 5 per cent. of 1,620,000,000 dols., the whole trade of the country.

The total amount of the Federal Treasury annual receipts from all kinds of taxation scarcely reaches 40,000,000 dols.

Amount received from States of the Republic 9,000,000 ,

Expenditure of Federal and States Governments, estimated at 55,000,000 ,

\$104,000,000 ,

The monetary circulation being 85,000,000 dols. would only be in the proportion of 81 cents to each dol. of the aggregate amount of taxes and public outlay of the country (104,000,000 dols.).

The total value of real estate, including the national lands, is estimated at something over 800,000,000 dols., and the annual amount of general transfer, either by hereditary successions, sale, or mortgage is put at 5 per cent. of its whole estimated value, say 40,000,000 dols.

The general annual amount of the movement of values in the country would be as follows :—

	Dols.
Amount of internal trade	1,500,000,000
Ditto of internal foreign trade	120,000,000
Ditto of Government taxes and expenditure	104,000,000
Ditto of annual transfer of landed property	40,000,000
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	\$1,764,000,000

This total amount of 1,764,000,000 dols. has to be effected by a total monetary circulation of 85,000,000 dols., showing that Mexico has only one dol. of monetary circulation for each 20 dols. of the general movement of values.



CHAPTER XX.

RECOMMENDATIONS.

As our commercial relations with Mexico are not restricted or complicated, as are those with the United States, by mutually antagonistic tariffs, and as the Mexicans are willing to give to England a large proportion of their trade, I trust that not only our manufacturers, but our Government will soon become alive to the importance of securing the advantages of reciprocity with a country which will become, in the near future, more advantageous than the Argentine (without its reckless speculation), and more stable and prosperous than any other country in the New World. The Government of Mexico will be found ready to modify its tariff, and to grant special facilities for British interests, so soon as it can do so, having due regard to the firm building up of its own financial and commercial position. When, therefore, the Mexicans are satisfied that the public opinion of Great Britain, backed up by its powerful financial and commercial resources, is truly desirous of becoming seriously interested in the development of that country, we shall find that substantial advantages will be forthcoming.

A reference to the recommendations and statistics of Consul Carden, showing the five years' average importations into Mexico, must indicate clearly that British manufacturers have a ready market for almost all classes of goods, and that our more enterprising competitors are securing it, because of our present inactivity.

The high tariff does not prevent business, as the home manufactures at the present time do not really interfere

with importation of almost anything, except perhaps the coarser varieties of cotton, woollens, and paper, and perhaps leather and saddlery.

I should perhaps warn manufacturers that great care must be exercised in the selection of agents, not only as regards their technical and business qualifications, but also that they be worthy and experienced representatives of their country, and capable of creating favourable impressions, and competent to adapt themselves and their business to the entirely novel commercial conditions of that country.

Trade is generally controlled by a few strong and independent houses, who have plenty of time to spare and are not violent competitors of each other. It takes time to make substantial progress, and business is largely done on the basis of feeling and sentiment and established acquaintance; it is, therefore, of no use sending a representative to Mexico merely upon a flying visit.

I fear, also, that to force our own ways and methods of business upon a people whose habits and ways are the very opposite of our own, must result in certain failure.

These facts are most important, and must not be forgotten in any arrangements which may be entered into for the purpose of securing Mexican trade.

I cannot do better than refer to the valuable recommendations contained in the report of Mr. Lionel Carden, H.B.M.'s Consul-General in the City of Mexico, to the "Royal Commission on Depression of Trade and Industry," printed in the appendix to the final report of the Commission:—

"On the condition of trade in Mexico," Consul Carden says, under heading 11: "Since the breaking off of diplomatic relations in 1867, the English commercial houses in Mexico, formerly so numerous and so respected,

have been gradually withdrawn, so that at the present day the trade between the two countries is almost exclusively in the hands of the Germans, whose interests are naturally more directed towards fomenting the trade of their own country and introducing goods of German, in preference to those of English, manufacture. The high character for probity and honourable dealing gained by our countrymen in former times would ensure a friendly reception to any English firm proposing to establish itself here. It must not, however, be overlooked that in view of the heavy freights, the high duties (averaging over 100 per cent. on the value of the goods), and the long credits which must be given, only firms with large capital can expect to do a profitable business here.

“The measures which would most tend to promote the further extension of British trade are, in my opinion:—

“(a) *The simplification of the Customs regulations, and the levying of fines only in those cases where the intention to defraud is clearly established.*

“The Government is at last becoming convinced that the stringent regulations at present in use are powerless to prevent fraud against the Customs, and only serve to drive away honest trade, and it is probable that ere long a more liberal system will be adopted.

“(b) *The establishment of bonded warehouses in the capital.*

“The arguments to be adduced in favour of this system are so numerous, and so well known, that it is only necessary to add that they receive additional force in the present case, firstly, from the extremely high rates of duties leviable by the Mexican tariff (averaging over 100 per cent. *ad valorem*); secondly, from the high rate of commercial discounts; and lastly, from the scarcity of

capital, which restricts the number of business houses, and consequently confines competition within very narrow limits.

“(c) The association of various firms with a joint agency in this country for the sale of their goods and the conducting of their business.

“I have already alluded to the difficulties which firms with small capital would be liable to encounter in Mexico, but there are other considerations also which would seem to make the principle of co-operative societies specially suitable for this country.

“In the first place, it is not easy to find persons properly qualified to conduct business in Spanish-American countries. For this it is essential that, besides having a thorough knowledge of business and of the language of the country, the merchant should have considerable local experience, should be thoroughly versed in the intricacies of the tariff, and, above all, should be possessed of great tact and temper. Without these qualities, which it is scarcely necessary to say are not commonly found united in one person, the work of building up a new business, though not impossible, would be much more difficult. I am, therefore, of opinion that to ensure a reasonable probability of success no commercial enterprise should be undertaken in Mexico without first securing the services of a manager of a very high order of capacity, the expense of which would be more adapted to the resources of a large company than a private firm. Secondly, a merchant in Mexico, owing to the large credits he is obliged to give, has to combine the business of trader and banker. Were a trading company to be established with a special banking department, or in intimate connection with a bank already in the field, all sales,

could be effected on a strictly cash basis, and this without losing the custom of buyers, who, though in every respect trustworthy, might not be able to pay in ready money.

“12. I have already shown that both the quantity and value of the principal articles of British trade exported in Mexico, have materially increased in the past five as compared with the preceding fifteen years. It will be seen by the table of exports from the United States to Mexico, that the American trade has increased in a far larger ratio even in those departments in which it competes with our own; and in view of the strenuous efforts they are making to introduce their goods in all parts of the Republic, it is only too evident the commercial supremacy the Americans have already wrested from our countrymen will, before long, become so absolute as practically to exclude a large proportion of British goods from this market.

“It remains to be proved whether the British commercial world is content to submit quietly and without an effort to be driven from a market, which, though insignificant, comparatively speaking, to-day, is unquestionably destined ere long, by its geographical position, by the extent of its territory, and by the density of its population, to be one of the most important, if not the most important, of the Spanish-American Republics.”

A long residence is not required in Mexico to impress one with the fact that the present is a transition epoch in the history of the country. Modern liberalism has replaced mediæval bigotry. The suppression of ecclesiasticism has released the people of Mexico from the oppression of the Romish Church, which has been always the fruitful cause of ignorance, superstition, violence, and revolution in the Central and South American countries.

The refining influence of the original Latin stock, engrafted upon some of the best aboriginal races, seems to be evolving more vigorous and ambitious characteristics. These causes, with the civilising influence of railways, telegraphs, and foreign emulation, seem to be bringing out the latent energies of the people, and in developing the arts of peace, instead of its finding vent in rebellion and disorder.

We have, therefore, good reason to expect a phenomenally rapid development in the near future. I have stated the actual facts of the case to the best of my ability. Other nations are fully alive to these facts, and are profiting accordingly.

The door is now wide open to England in preference to that of any other country. The business of Mexico may be had almost for the asking. The Mexican wants are many. Banking facilities, railways, steamships, and the supply of almost all the commodities of every day life, are wanted in exchange for every class of produce which Mexico can produce.



CHAPTER XXI.

CONCLUSION.

In concluding what one cannot but look upon as a most imperfect sketch of a most important country, it seems essential that I should briefly review the whole position, more especially as my object has been to analyse its commercial possibilities, so far as they bear upon, and are influenced by, the economic conditions of our own.

In England the dominant ruling force is that of the average opinion of business men, and the dominant form of association by them is that of the joint-stock company.

It seems to be a matter of pressing urgency that public opinion and the opinion of business men should be educated for its new responsibilities, and, of course, directed to the study of the conditions of other countries, as fresh areas for the development of England's commerce.

The rapid changes of the last few years have caused the conditions of foreign trade to become more difficult; Protection thrives in spite of the complete refutation of all its arguments, and competition and combinations continue always to our disadvantage.

In consequence of these changed conditions, past experiences are less to be relied upon, and thus England's difficulty to-day is that which directly and seriously concerns her own industrial position, and from the still greater and more serious changes taking place in the different industries within our own country.

England, at present, owes her leading position, in a great measure, to her sagacity and good fortune in having

at first seized those industries for which she had the greatest natural advantages, and to her having carried those products to a ready market.

Some of these markets are now exceedingly difficult to supply, and others have been purposely "protected" by a hostile tariff, to our great and lasting injury.

Formerly our shores attracted the pick of the skilled artisan of the world. These are now attracted to the very country with whom we are competing. These American competitors, either singly or in combination, from their national character of restless energy and versatile enterprise, and from being untrammelled by the ponderous methods of the joint-stock company, become our successful rivals in almost every fresh market. Having the additional advantage of a phenomenal expansion of their own industries, they are always enabled to manufacture upon a large scale, and thus, by effecting economies, make successful competition by our own people all the more difficult. Diminishing trade to the manufacturer, therefore, means greater difficulty in successful competition, as well as less work and wages to the artisan, crushing out not only his physical but his moral and mental strength, and thus our trade in England is not increasing in the same ratio as our population.

To-day we are enjoying the blessings of peace, and a greater measure of freedom than any other country in the world (appreciated by none more than those who have travelled in other countries); but the prosperity we enjoy is more connected with the past than the present, and, therefore, under such conditions, each year the difficulty of finding employment seems to become greater for those who are ready and willing to work. The remedy does not so much lie in the necessity for the emigration of those willing workers, as that "public opinion," or, rather, the

opinion of business men, should be aroused into renewed activity, for the more practical philanthropy of increasing the facilities for English trade, and manufacturing enterprise.

The report of the minority of the Royal Commission appointed to enquire into the depression of English trade, whilst objecting to "protection *per se*," sets out our position most clearly in paragraphs Nos. 54, 55, 57, and 90.

"It is clear, then, that, relatively to population, there is a decline in the employment afforded by agriculture and textile manufactures, which appears progressive.

"Such a decline is of special significance in the case of a country like our own, which, with a rapidly-increasing population, is continually reducing its production of staple articles of food, and buying an increasing proportion of them abroad. For the other great industries of a nation so circumstanced ought to increase as much more largely in proportion to its population, as would compensate for the diminished employment afforded by agriculture.

"If its people grow less of their food, they must needs produce so much more of some commodities, through the sale of which their labour can be exchanged for food.

"During the past 40 years a great change has been wrought in the circumstances of all civilised communities, by the application of mechanical and scientific aids to the production and transport of commodities the world over. The amount of labour required to accomplish a given amount of production or transport is already incomparably less, and is being continually reduced. The great difficulty consists no longer, as of old, in the scarcity and dearness of the necessities and conveniences of life, but in the struggle for an adequate share of that employment which affords to the great bulk of the population their only means of obtaining a title to a sufficiency of

those necessities and conveniences, however plentiful and cheap they may be. Without that adequate share of employment, increasing masses of the people must lead a precarious and miserable existence in the midst of plenty, no matter what the increase of the total wealth of the nation, as is but too plainly shown by the contrast between the eastern and western quarters of the Metropolis.

“ The healthy and continuous growth of our industries not only in productiveness, but in power to afford full and well remunerated employment to the population, is, therefore, the question of supreme importance; for upon that must ultimately depend not only the value of fixed property of all kinds, but the prosperity and social well-being of every class of the community.

“ This growing difficulty (the struggle for an adequate share of employment in presence of the abundance and cheapness of commodities) finds its expression in the system of tariffs, export bounties, and other commercial restrictions, adopted and maintained by all civilised nations except our own.”

The effect upon this country of foreign tariffs and bounties is to narrow the market for our manufactures, and so to cramp the exercise of our industries, and to arrest their growth, as to render the employment of those engaged in them partial and irregular, and thus seriously to limit our total production of exchangeable wealth. It is on many accounts impossible for those whose industry is thus checked to turn to the production of “something else” which will be accepted in exchange, but primarily for the simple reason that those tariffs are now applied to almost every exportable product of British industry. Their persistent influence has created protected industries in displacement of our own, over so large an area of the

civilised world, that the exercise of our industry is at last effectually limited, and we are disabled from providing adequate employment for our large and increasing population. We have consequently less to spend, both in the home trade and in the purchase of the raw materials of our industries and other commodities from abroad. For the conditions of international exchange are inflexible: we can only, in the long run, buy as largely and as freely as we are permitted to sell.

An important effect of the combined influence of foreign tariffs and free imports is to discourage and lessen the investment of capital in the development of our own agriculture and manufactures, and to stimulate and increase its investment in foreign land securities and foreign industrial enterprises. This directly operates to limit the employment of labour in this country. We think this important feature in our economic position has not hitherto received the attention it deserves.

Mexico provides us with an excellent opportunity just now to inaugurate a fresh form of national policy, which would give new life to the commercial aspirations of the English nation.

We are certainly suffering from the "effects of the continued influence of foreign tariffs and free imports;" therefore, in these early days of Mexico's development, it seems an undoubted business necessity to seek more intimate commercial relations with that country.

It may be said, perhaps, that although Mexico wants, or is likely to want, everything which Great Britain desires to sell, yet there is a lack of ability on the part of Mexico to pay for what she wants. In reply, we suggest that poor countries are the very ones with whom it is especially desirable that Great Britain should cultivate trade. If the volume of trade be small at first, the profits of such trade

would be very large. If the inability of Mexico to pay for what she wants at the present time is great, certainly the quantity and value of her native produce, apart from precious metals, which Mexico can export, is abundantly sufficient to pay for such foreign products as she may need, as they are very considerable and varied, and cannot even be estimated by the statistics of the last decade.

To-day so much of her minerals and produce of high intrinsic value are almost valueless in the interior, because of the want of transport facilities. As the country develops and is peopled, the commodities of every-day life become a first necessity. Then there are railways to build, steamship lines to commence, the country to explore, and the few large navigable rivers to open up. The riches of the mines of Mexico will then really become known, and millions of acres of lands of wonderful fertility will be opened out for cultivation and colonisation. We have need of securing the advantages of such a country as much as the Mexicans have need of all we have to give to them.

THE END.



APPENDIX A.

LAWS RELATING TO IMMIGRATION AND COLONISATION.

(*From Bureau of American Republics. Bulletin No. 9.*)

Mexico has made sacrifices to induce people to its shores, but its efforts in this behalf have not caused any considerable influx of foreigners to the country. Mexicans attribute this state of things to two causes, viz., the fact that free land is situated at a considerable distance from means of communication, and that the country is not so devoid of native population as is generally supposed. The Indian lives on very little, and can therefore afford to work for such paltry wages that foreign immigrants cannot compete with him. When the general state of the country shall be such as to create a voluntary current of immigration, it is confidently believed that the Republic will reap the reward of its sacrifices, for it is a country where the immigrant, under the colonisation laws, has the smallest amount of taxes to pay.

The first steps taken in the direction of inducing aliens to seek Mexico's fertile fields date back to 1827. In the year 1821 a law was enacted entitled "Prosperidad General" (general prosperity), in which special reference is made to the rapid growth of the foreign colony in the State of Texas. In the year 1846 the then Minister for Foreign Affairs, José M. Lafragua, presented a plan for legislation to Congress in which, *inter alia*, he spoke of "the neglect of colonisation as a crime of high treason," and held out the flattering but delusive hope of establishing innumerable colonies to contain at least 50,000 persons. During the imperial period Señor Robles submitted to Congress plans of the same sort, as did also Señor Balcárcel in 1868, and Señor Riva Palacio in 1877; but up to 1882 no really serious practical efforts were made to attract immigration, and the results obtained up to the present are comparatively insignificant.

The colonisation law now in force was enacted and promulgated on the 15th day of December, 1885. It comprises four chapters and thirty-one articles, the former being entitled respectively, "Of the Survey of Lands," "Of Colonists," "Of Companies," "General Provisions."

The provisions of this law are in substance as follows :—

For the purpose of securing lands suitable to the establishment of colonies, the Executive will cause the waste or Government lands in the Republic to be surveyed, measured, subdivided, and appraised, appointing to this end the corps of engineers he may deem necessary, and determining the methods to be followed.

No subdivision shall in any case exceed 2,500 hectares (about 6,177 acres) in extent, this being the greatest amount of land which shall be conveyed to any one individual of lawful age and legal capacity.

The lands surveyed, measured, subdivided, and appraised may be conveyed to foreign immigrants and inhabitants of the Republic who may desire to establish themselves thereon as colonists, under the following conditions :—

(1.) By purchase, at the price set by the Engineers and approved by the Department of Public Works, payable in ten years in equal instalments, the first becoming due two years after the establishment of the colony.

(2.) By purchase, the price being paid on entry, or in instalments on shorter time than that provided in the preceding section.

(3.) By gratuitous concession, when requested by the colonist; but in this case no cession shall exceed 100 hectares (about 247 acres), and the colonist shall receive no title to the same until he shall have shown that he has retained the land in his possession, and has wholly cultivated it, or to an extent not less than one-tenth of the whole for five consecutive years.

So soon as there shall be lands suitable for colonisation under the conditions herein provided, the Executive shall determine which should be settled at once, publishing the plots thereof and the prices at which they shall be sold, endeavouring in every case that the sale or gratuitous conveyance shall be of alternate sections. The remaining sections shall be reserved to be sold under the conditions prescribed by this law when they shall be sought, or when the Executive shall so determine, the Executive being empowered to mortgage them for the purpose of raising funds, which, added to the proceeds of the sale of sections of land, shall be exclusively destined to the carrying out of colonisation.

To be considered as a colonist, and to be entitled to the privileges conferred by this law, it is necessary that the colonist, in case he is a foreigner, shall come to the Republic provided with the certificate of the consular or immigration agent, issued at the request of the said immigrant, or of the company or corporation authorised by the Executive to bring colonists to the Republic.

Should the petitioner reside in the Republic he must apply to the Department of Public Works, or to the agents authorised by the said Department, to admit colonists to the colonies which shall be established in the Republic.

In every case petitioners must present certificates to the proper authorities setting forth their good character, and their occupation previous to petitioning for admission as colonists.

Colonists settling in the Republic shall enjoy for the period of ten years, counted from the date of their establishment, the following privileges:—

(1.) Exemption from military service.

(2.) Exemption from all taxes, except municipal.

(3.) Exemption from all import or domestic duties on articles of consumption not produced in the country, agricultural implements, tools, machines, outfits, building materials, household furniture, and animals for breeding purposes, and thoroughbreds for the use of the colonies.

(4.) Exemption, personal and non-transferable, from export duties on the products of cultivation.

(5.) Premiums on praiseworthy productions, and prizes, and special protection for the introduction of new agricultural interests or industries.

(6.) Exemption from fees for the certification of signatures and issuing of passports delivered by consular agents to parties coming to the Republic as colonists by virtue of contracts entered into between the Government and any company or companies.

The Department of Public Works shall determine the number and kind of articles which in each case shall be admitted free of duties, and the Treasury Department shall regulate the manner of admission to prevent fraud and smuggling, but without retarding the prompt despatch of the said articles.

Colonists settling on lands barren of trees, and who shall prove, two years previous to the lapse of the period of exemption, that on a portion of their section, which shall not be less than one-tenth thereof, they have laid out trees to a number proportionate to the land planted on, shall be exempt from taxes on the whole land for one year longer, and, in general, shall have exemption for one year further for each tenth part of their land so laid out.

The colonies shall be established under the municipal jurisdiction, subject, as regards the election of their authorities and the levying of taxes, to the general laws of the Republic and the laws of the State wherein they are established. The Department of Public Works may, however, appoint agents in said colonies for the purpose of better directing their labours and exacting the payment of the amounts which may be due to the Federation for any titles conveyed.

Colonists are required to carry out their contracts with the Federal Government, or with the individuals or companies transporting or establishing them in the Republic.

Every alien immigrant settling in a colony shall, at the time of such settlement, declare before the Federal colonisation agent, notary, or proper judicial officer whether he proposes to retain his nationality or desires to embrace Mexican citizenship, conceded him by the third section of Article 30 of the Constitution of the Republic.

Colonists shall be vested with all the rights and obligations which to Mexicans and foreigners, under the circumstances, are conceded and imposed

by the Federal Constitution, besides the temporary exemptions conceded by this law; but all questions arising, of whatever character, shall be subject to the decisions of the courts of the Republic, to the absolute exclusion of all foreign intervention.

Colonists abandoning, without due cause, for more than a year, the lands which shall have been sold them, shall forfeit the right to said lands and the amounts they may have paid therefor.

The right to a gratuitous title shall be forfeited by abandonment of the land, or failure to cultivate it for more than six months without good cause.

One section shall be ceded without cost, in localities designed by the Federal Government for new settlements to Mexican or foreign colonists desiring to found the same; but they shall not acquire the title to said section until they shall show that within two years from the foundation of the settlement they have erected thereon a house, forfeiting the right to said title in case of failure to so build. It is the purpose to cede such sections alternately.

The Executive is empowered to aid colonists or immigrants, within the appropriations to that effect made, whenever he shall deem it advisable, by furnishing them expenses of transportation for themselves and their baggage by sea, and in the interior to the terminus of the railroad lines; he may further furnish them with free subsistence for fifteen days, and no more, in the localities he may approve, and also with tools, seeds, building materials, and animals for work and breeding; these latter advances, however, shall be repaid in the same manner as the price of the lands.

The Executive may authorise Companies to open up (habilitar) waste lands by measuring, surveying, subdividing into sections, appraising, and describing the same, and to transport colonists, and establish them on said lands.

For the purpose of obtaining the necessary authorisation companies shall designate the waste lands they propose to occupy, their approximate extent, and the number of colonists to be settled upon them within a given time.

The proceedings incident to the demarcation or survey shall be authorised by the district judge within whose jurisdiction the waste land to be surveyed is situated, which done, and there being no adverse claimant, the record will be delivered to the company to be presented to the Department of Public Works, where the other formalities demanded by this law must be complied with. Should an adverse claimant present himself, the case will be tried as hereinafter provided, the representative of the Federal Treasury being a party thereto.

In return for the expenses incurred by the companies in opening up waste lands, the Executive may cede them not more than one-third of the land thus opened up, or its value in money, but under the express conditions that they are not to convey such lands so conceded to foreigners not authorised to acquire them, nor in greater quantities than 2,500 hectares, under pain of losing, in each

case, the portions of land so conveyed, in violation of said conditions, which portions shall at once become the property of the nation.

Lands surveyed by the companies, excepting such as may be ceded to the same in return for expenses incurred in opening them up, shall be conveyed to colonists, or be reserved under the conditions before mentioned.

Any authority conferred by the Executive for opening up waste lands shall be void and non-extendable, whenever work thereon shall not have been commenced within the term of three months.

The Executive may contract with companies or corporations for the introduction into the Republic, and the establishment therein of foreign colonists or immigrants under the following conditions:—

(1.) The companies shall fix the exact time within which they will introduce a determined number of colonists.

(2.) The colonists or immigrants shall fulfil the conditions hereinbefore prescribed.

(3.) The bases of the contracts the companies may make with the colonists shall conform to the provisions of this law, and shall be submitted for approval to the Department of Public Works.

(4.) The companies must guarantee to the satisfaction of the Executive the carrying out of the obligations assumed in their contracts, which contracts must name the causes in which forfeiture and fines shall be imposed.

Companies contracting with the Executive for the transportation to the Republic and settling therein of foreign colonists shall enjoy for a term not to exceed twenty years the privileges and exemptions following:—

(1.) The sale on long time and at low price of waste or Government lands for the exclusive purpose of colonising the same.

(2.) Exemption from taxation, except the stamp tax on capital invested in the enterprise.

(3.) Exemption from port dues, except those set aside for improvements in ports, to all vessels that on the companies' account shall carry ten families, at least, of colonists to the Republic.

(4.) Exemption from import duties on tools, machines, building materials, and animals for work and breeding, which shall be exclusively destined for an agricultural, mining, or industrial colony, whose establishment shall have been authorised by the Executive.

(5.) Premiums for each family established and a second premium for each family disembarked; premiums for each Mexican family established in a foreign colony.

(6.) Transportation of colonists at the expense of the Government on subsidised steamship and railroad lines.

Foreign colonisation companies shall be considered as Mexican, being

required to have a legal domicile in one of the cities of the Republic, without prejudice to their having one or more abroad, and they are bound to have at all times a Local Board of Directors and one or more attorneys *de facto* fully empowered to treat with the Executive.

All questions arising between the Government and the companies shall be decided by the Courts of the Republic, and according to its laws, without any intervention whatever on the part of foreign diplomatic agents.

Private parties setting aside any portion of their lands for the purpose of colonising them, with not less than ten families of foreign immigrants, are entitled to have the same and enjoy equal privileges and exemptions with the colonies established by the Federal Government, whenever they shall conform to the conditions imposed by the Executive to assure the success of the colony, and whenever among said conditions shall be one requiring said colonists to acquire, by purchase or cession, one section of land for cultivation.

The Executive may provide private parties with foreign colonists, by stipulating with them the conditions under which they are to be established, and he may aid them by furnishing the expenses of transportation of said colonists.

The colonising of the islands in both oceans shall be done by the Executive, subject to the provisions of this law, the Government reserving on each island 50 hectares of land for public use. In case the island should not have the superficial area necessary for the reservation herein specified, no sale of land shall be made thereon, and said land may only be rented on short terms.

Colonies established on islands shall always include Mexican families to a number not less than one-half of the total colonist families.

The Executive is authorised to acquire, by purchase or cession, private lands, whenever they shall deem it expedient to establish colonies thereon, subject, however, to the appropriations to be made for this purpose.

The question of inducing aliens to settle in Mexico has awakened not only the interest of the General Government, but some of the State Governments have given it much time and thought. Foremost among these is the Government of the State of Vera Cruz. On the 25th December, 1885, the Legislature of this State passed a law founded upon that quoted on the preceding pages. This law authorised the Governor to enter into contracts with owners of suburban landed property for the purpose of colonising them under the law. All such owners entering into a contract are entitled to a rebate on their taxes at the rate of \$5 for every family settling on their lands who shall engage in agriculture and kindred pursuits. Owners of suburban lands receive a premium of \$5 for every fifteen foreign families established on their lands as colonists, for an uninterrupted period of three years. Premiums are likewise offered for every new industry established in such colonies, and to the colonist showing the largest area of land under cultivation. Many exemptions from taxes and contributions are granted.

Every colony of fifteen or more families, definitively established in any locality in the State, is entitled to organise its own local police in accordance with law, and to solicit from the Government a subvention to carry out such public works as may be deemed necessary in the interest of the colony.

Notwithstanding the inducements offered by this law, the total foreign population of the State of Vera Cruz at the beginning of the year 1888 was only 4,549, distributed over 18 cantons, of which 274 were Americans and 14 Africans.

Under the first-quoted law of the general Government some eighteen colonies have been founded, and from the years 1881 to 1888 public lands were surveyed by different companies to the extent of 36,578,780 hectares (about 90,386,165 acres). Of this area 11,958,348 hectares (about 28,549,078 acres) were conveyed to the companies for expenses incurred in the survey, 13,160,918 hectares (about 32,520,628 acres) were sold, and there remained to be disposed of 11,459,514 hectares (about 28,528,849 acres).

As before stated, there are 18 colonies in the Republic. The latest obtainable statistics (1890) gives them as follows:—

COLONIES.	STATES.	INHABITANTS.
Porfirio Diaz	Morelos	115
Manuel Gonzalez	Vera Cruz	402
Carlos Pacheco	Puebla	310
Fernandez Leal	Do.	390
Diez Gutierrez..	San Luis Potosi	134
Sericultora	Mexico	152
La Ascencion	Chihuahua	2,294
Aldana	Federal District	111
San Pablo Hidalgo	Morelos	196
San Vicente de Juarez	Do.	83
San Rafael Zaragoza	Do.	124
Juarez	Chihuahua	650
Tapachula	Chiapas	93
Ciel de Leon	Oaxaca	10
Guanajuato	Guanajuato	37
Lerdo	Sonora..	190
Topolobampo..	Sinaloa..	300
International Company ..	Territory of Lower California	933
		6,524

Among the foreign colonists Americans rank second in point of numbers, the Indians being first. The colonists devote themselves to the raising of cereals, tropical fruits, sugar cane, vanilla, tobacco, ramie, and the cultivation of the silkworm, according to the nature of the soil upon which they are established. The colony of 152 Mexicans in the State of Mexico is devoted exclusively to the cultivation of silkworms, and the success attained is gratifying.

The last-named colony, the International Company, owns an immense tract of land, estimated to contain 17,000,000 acres, situated in and around Ensenada de Todos Santos (All Saints' Bay), in Lower California. This tract lies between the south-western boundary of the United States and parallel 28 deg. north, near the port of Santa Rosalia. The colony is being rapidly settled with foreign immigrants, mostly Americans. The soil is most fertile, and adapted to the raising of fruits, cereals, and vegetables. Water is scarce, but artesian wells are being bored. Ensenada is 100 miles from San Diego, with which city it maintains telegraphic and telephonic communication. A railroad between the two localities is now nearly completed.



APPENDIX B.

CUSTOM HOUSE REGULATIONS.—INFORMATION FOR SHIPPERS.

In giving the following regulations of the Mexican Custom House it must be distinctly understood that a most pernicious system at present prevails in Mexico, by which the officials receive their chief remuneration from the proceeds of *half the fines* which are levied upon the unfortunate shippers, for the slightest infraction or omission of any of the regulations here given. The following instructions are taken from Bulletin No. 9, American Republics :—

I. Shippers of goods to Mexican ports must supply the invoices of the objects they are sending, even when such objects are destined for the public service of the nation, or are free from import duty. Shippers must make out these invoices separately for each of their consignees. Further, they must make four exact copies of each invoice, according to the form given on page 186. They must also take care that the total number of packages be stated in figures and letters.

II. In the consular invoices several cases, bags, barrels, or packages of any description must not be inscribed as “one” package, if packed up under one cover, else double duty will be collected.

From this rule are excepted :—

- (1.) Heavy goods of common classes, which are generally only tied up together, such as, for instance, iron bars, metal sheets, boards for packing purposes, and other similar articles.
- (2.) Petroleum and oil cans, and other liquid merchandise generally put up in large tin cases; but in these cases shippers must state accurately in their invoices the number of cans contained in each case.
- (3.) Piece goods in packages or cases, bottles or flasks, containing alimentary substances, drugs, perfumery, etc., and generally small parcels, sacks, or other objects put up in the same package.

III. In the consular invoices weights (or net weights, if there is no tax) must be given separately of the various merchandise of a different class or packing whenever their respective weight differs by more than ten kilogrammes (22 pounds English). It is also prohibited to give average widths for goods that pay duty by the square metre if they differ by five millimetres (one-fifth inch). The only exceptions from these rules are packages containing goods free of duty and those that pay only one-

half per cent. per kilogramme, in which case their weights can be thrown together.

IV. It is prohibited to write between the lines, to make scratches, blots, or rectifications, in the consular invoices, under a fine of 100 Mexican dollars for each fault of this character discovered in these documents. Such faults are only tolerated in the following cases:—

- (1.) When the rectifications have been made with written explanations at the foot of the documents, and before taking out the consular certificate.
- (2.) When, notwithstanding the corrections, the several copies of the same document agree.
- (3.) When the interlineations, scratches, etc., relate to points that have no influence on the question of duties.

V. When shippers send in the same package goods paying different duties they must declare in the consular invoice, besides the gross weight of the package, the net weight or legal * weight of each article contained in the same, in order to be able to calculate the duties relating to each class of goods contained in the package. Should this rule not be complied with, duties will be collected on the scale of the highest duty-paying class of articles for the whole of the package.

VI. The shippers of goods must present for certification, before the sailing of the boat, four copies of each invoice to the Mexican consul or consular agent residing in the place of shipment or in the port where the boat is being loaded. They will deposit three copies of the invoice in the consulate and retain the copy which the Mexican official will hand them with the certificate and receipt attached. The shippers have to send this copy of the consular invoice, with the corresponding receipt attached, and with such precautions as they may deem fit, to the consignees of the goods, in order that the consignees shall be able to comply with the formalities prescribed by law.

VII. The absence of the consular invoice, with the receipt attached to it by the stamps of the consulate (these being the two documents which the consignee must present), will entail the payment of double duty.

VIII. The invoices should be written in Spanish, but they will also be admitted if written in any other well-known language.

IX. The shippers of samples require no consular certificate to their invoice; it is sufficient to state in this latter whether the samples have any value or not, the kind or kinds of the articles, the gross weights of the packages, their marks and numbers, and the name of the consignee, as can be seen from the form.

X. The consignees of goods in Mexican ports are responsible by law for the faults committed by the shippers.

^o L gal weight is the net weight, including the inner inseparable packings or wrappers.

XI. As regards the payment of consular fees, the shippers of goods must submit to the following tariff:—

For certifying ship's manifest	\$10
For certifying manifest if ship is in ballast	4
For certifying set of form copies of each invoice	4
For certificates to captains or shippers	2
When the certificates named in the foregoing paragraph are requested to be made out in duplicate, triplicate, etc., there has to be paid extra for each copy	1

The office hours of the Mexican Consulate being from 9 a.m. to 3 p.m., the parties requiring them to do work up to 8 o'clock in the evening and on feast days have to pay double charges, and after 8 o'clock in the evening treble charges.

XII. Passengers landing in Mexican ports must present their luggage at the Custom House, and if they happen to bring with them dutiable objects, they must declare them at once in writing, with all the necessary details for taxation.

XIII. Each passenger can import with him, free of duty:—

- (1.) His own articles of clothing, which, according to the judgment of the Custom House, must not be excessive, having regard, however, to the conditions of the passenger.
- (2.) The articles on his person, or for his use, such as watch, chain, buttons, cane, etc., and one or two firearms with their accessories, and up to 100 cartridges.
- (3.) If the passengers have a profession or a trade, they can introduce, free of duty, the instruments or tools indispensable to the exercise of their profession or trade.
- (4.) Adult passengers can introduce, free of duty, 99 cigars, 40 packages of cigarettes, and half a kilogramme (one pound) of snuff or chewing tobacco.
- (5.) Artists who are members of an opera, theatre, circus, or other company, besides the foregoing, can also introduce, free of duty, their costumes and scenery; provided, however, that such articles form part of their luggage, and are really intended for the uses declared.

XIV. Any objects which, in the opinion of the Customs officials, have not been worn, will have to pay duty, if dutiable, even when the passengers bring them in their luggage.

XV. When passengers bring furniture or other household goods with them, they will be allowed a rebate of duty corresponding to the depreciation of value in consequence of their use.

XVI. Passengers having nothing to pay for the examination of their luggage, the *employés* of the Customs must fulfil their duty with the greatest regard for the travellers, and with the utmost politeness.

Form of a Consular Invoice for Merchandise.

Invoice of the following goods which the undersigned ships on [Name of the boat], Captain _____, consigned to _____, of [Name of port], in the Mexican Republic, where the boat is going.

[Signature of Shippers.]

N.B.—The Specification of each and all the goods must be made precisely as indicated above. The total number of the packages must also be given in figures and words, and the declaration to be made by the Shipper must precede his signature. Legal weight is the net weight of the goods, including their inner and inseparable packing, such as perfumed soap in its wrappings, perfume with its bottles, etc.

Form of a Declaration for Samples

Note of the samples which the undersigned ships on [Name of boat], Captain _____, consigned to _____, of the port of _____, in the United States of Mexico, where the boat is going.

Number of packages in figures and words.	Class of the packages.	Class of the merchandise.	Value or ratiocess.	Gross weight of each package in figures and words.	Consignee.

Besides the foregoing instructions to shippers and information for merchants and travellers, some further advice in the same line will be found worthy of attentive perusal:—

In shipping groceries, if any doubt exists as to whether the duty is on the gross, net, or legal weight, it is better to give full particulars, gross, net, and legal weight. Groceries, such as flour, canned goods, cheese, tea, spices, etc., generally pay on the net or legal weight.

The classification of dry goods and drugs varies, so that no general instructions could be of any practical value. Such as require information in this line should address Customs' brokers at the port of destination.

Shippers of drugs will do well to state plainly and correctly the gross, net, and legal weights in case they are not posted as to the duties. With this data the Customs' broker will take the needed weight.

Shippers to Mexico should bear in mind that package shipments pay duty on the gross weights, and should, therefore, be packed in light packages, as durable as possible. Mexican merchants, especially in the interior, where the means of transportation are not of the best, prefer goods shipped them to be baled instead of packed in cases.

In machinery shipments shippers should bear in mind that only machinery which cannot be moved by hand or foot, whether agricultural, mining, or other industrial machinery, is imported free. All machinery which can be moved by hand or foot pays duty, even if it can also be adapted to horse, water, or steam power, or if it be intended by the importer to be moved by any of these higher powers. It is of very great importance, therefore, in making shipments to state clearly if or not adaptable to hand or foot power. Those parts of machinery which can be used independently of the machine pay duty, even when accompanying the machine, such as blocks and tackles, tin cans used in weaving machinery, moulds, plain iron bars, etc. The Customs Department having ruled that all tanks shall pay duty, whether made of wood or iron, therefore describe all such articles, giving them separate weights when shipped with machinery.

Machinery should always be light for transportation, which is often done on mules; no piece should weigh over 150 or 200 pounds. It should also be of a good and durable character, as Mexico is not a country for such repairs as imperfect or broken machinery would require.

Manufactures of iron, not otherwise specified, pay 10 cents per kilogramme if over 20 kilogrammes, and 20 cents per kilogramme if less than 20 kilogrammes.

Those of copper or brass	..	..	..	..	..	\$1.30
White metal	..	..	..	..	..	.40
Nickel plated articles	..	..	..	..	..	.70
Gold and silver plated articles	..	..	..	..	..	1.30

Articles manufactured of different metals pay duty on the entire weight assessed at the rate applicable to the metal paying the highest duty. State,

therefore, in such cases the metal of which such articles are made, and whether they contain wood, cloth, or leather.

Crockery pays 15 cents, glassware 20, when plain; crockery or glassware with mountings, if brass, pays 30 cents, if nickel plated, 70 cents, if silver plated \$1.30 per kilogramme; therefore, it is necessary to state if they have mountings, and of what kind.

Wines pay mostly by weight; also beer. State precisely the net weights of the liquor in addition to the gross weights. A small difference in the net weight of each pint of beer, for instance, will make a difference in a car load, if shipped in that way. Beer generally weighs 360 grammes of liquid per pint bottle, and a car load has 100 barrels of ten dozen pints each. Now, if it be declared 350 grammes per bottle, and should turn out to weigh 360 grammes, the difference would be 10 grammes by 12,000 bottles, equal to 120 kilogrammes, which at 20 cents per kilogramme makes \$24. This amount would be collected by the Custom House, in addition to declared weight, and an equal amount, or \$24, as fine or penalty for underweight. On the other hand, if the weight is over-estimated, the Custom House will not refund any duties paid. So it is necessary to give the precise net weight on all goods paying by weight.

Tobacco pays on the net weight, whether leaf, chewing, or smoking tobacco.

In conclusion, it would be well to say that manufacturers desirous of introducing their goods in Mexico should not only send earnest, intelligent men to show the goods, but should also have men accustomed to their use, and able to impart the knowledge to others, who may be not only unacquainted with the goods but oblivious of their utility. Before a demand can be created, it is necessary that the benefits to be derived from the use of the articles be clearly shown. Mexicans are intelligent and quick to grasp a situation, but their methods of doing business differ from those of other countries, and the men who are sent to Mexico must not only speak the language, but fully understand the business and social customs of the country.

MARITIME AND FRONTIER CUSTOM HOUSES OF MEXICO.

PORTS OF ENTRY.

Gulf of Mexico.—Matamoros, Tampico, Túxpan, Vera Cruz, Coatzacoalcos, Frontera, Isla de Carmen, Campeche, and Progreso.

Pacific Ocean.—Soconusco, Tonalá, Salina Cruz, Puerto Angel, Acapulco, Manzanillo, San Blás, Mazatlán, Altata, Guaymas, La Paz, Cape St. Lucas, Magdalena Bay, and Todos Santos.

Northern Frontier.—Tijuana, Quitorquita, Nogales, Sásabe, Palominas, Ascension, Paso del Norte, Presidio del Norte, Piedras Negras, Laredo de Tamanlipas, Guerrero, Mier, and Camargo.

Southern Frontier.—Zapaluta.

PORTS FOR THE COASTING TRADE.

Gulf of Mexico.—Soto la Marina (Tampico), Tecoluta, Nautla, Alvarado, Tlacotálpam, Santecomapan (Vera Cruz), Tonala (Coatzacoalcos), Tenocique (Frontera), La Arguada, Villa de Palizada (Isla de Carmen), Champoton (Campeche), Celestum, Isla de Mujeres, Isla de Cozumel (Progreso).

Pacific Ocean.—Tecoanapa, Zihuatanejo (Acapulco), Chamela (Manzanillo), Maria Madre (San Blás), Topolobampo, Perihuete, Teacapam (Mazatlan), Agiabampo (Guaymas), Mulegé, San José del Cabo (La Paz), Isla de Guadalupe (Todos Santos).

HARBOUR REGULATIONS AND DUES.

Under the provisions of the treaty of 1848, between the United States and Mexico, vessels of the former country are on the same footing in Mexican ports as Mexican vessels as regards tonnage, harbour, and light dues, pilotage,* salvage, and all local charges. The coasting trade is, however, reserved by either nation for its own vessels. United States vessels may import into Mexican ports merchandise the growth or manufacture of the United States on the same terms as if the same were imported in Mexican bottoms. The duties of imports are to be no higher or other than levied on similar merchandise the growth or manufacture of the most favoured nation. In United States ports Mexican vessels and merchandise are accorded the same privileges enjoyed by American vessels and merchandise in Mexican ports.

Following are some of the more important harbour regulations of Mexico :—

When there are no Mexican vessels to carry on the coast trade, foreign sailing and steam vessels are permitted to engage in such trade. When the quantity of merchandise prepared for shipment from one port to another of the Republic is so small that it would not be enough to fill a Mexican vessel its shipment upon a foreign steamer is allowed.

The fact of a foreign vessel arriving at a port of the Republic with Mexican effects shipped at any other Mexican port shall not subject her nor the merchandise to any penalty, for, should there be any irregularity in the clearance, the collector of the Custom House at the port of clearance will be answerable therefor.

Every shipmaster arriving with a cargo at a Mexican port is bound to produce his manifest. Vessels from the United States must produce the *visa* of the Mexican Consul at the port of departure. This is also required from vessels direct from Europe. The manifest and bill of lading will be accepted by the Customs' authorities as a basis for entering the merchandise; but they must agree with the cargo as it is discharged. The vessel is held responsible for errors or misdeeds of owners of goods. The absence of such documents, or any omission in them, is liable to be punished by a fine.

* Pilotage is not obligatory under the Mexican law.

The copies of manifests or bills of lading, where there is no Mexican Consul or commercial agent, must be forwarded by post, under cover, one each to the Treasury Department of Mexico and to the Custom House to which the goods are consigned.

Manifests must be legibly written, and clearly compiled.

All regulations must be strictly carried out by shipowners and masters. Any violation of them is rarely overlooked by the Customs' officials, and heavy pecuniary penalties are inflicted for very slight defects.

It may be added that provisions at Mexican ports are, as a rule, scarce and dear, and that water, which is also scarce, often costs between $1\frac{1}{2}$ and 2 cents per gallon.



The following is a translation of the form for a Mexican inward manifest of cargo from a foreign port:—

General manifest of the cargo which, bound for the port of _____, in the Mexican Republic, is conveyed by the subscriber, _____, master, in the _____, of _____ tons burthen, consigned to _____, doing business in said port.

<i>Marks and Comments.</i>	<i>Numbers of the packages.</i>	<i>Number of packages, in figures and words, itemized.</i>	<i>Character of the packages.</i>	<i>Gross weight in figures and words.</i>	<i>Nature of the contents of packages.</i>	<i>Consignees.</i>

[Place and date.]

I certify that I have no goods on board my vessel other than those declared in this manifest, and that I am bound for the Mexican Republic to trade legally therewith.

[Signature of Master.]

Consulate of the United Mexican States in _____

[National Seal.]

I have received for certification from _____, master, the four copies of the manifest of _____, which sails with _____ packages (or in ballast) for the Mexican port of _____, three certified copies remaining in this consulate, one being returned to him after having been entered in the proper book under its corresponding number _____, and attaching this receipt to the manifest to be delivered by means of the consulate seal.

[Place and date.]

_____,
Consul.

APPENDIX C.

INTERNAL TAXATION AND FISCAL UNIFICATION.

INTERNAL TAXATION.

The present system of Internal Taxation in Mexico, in its present form, is likely seriously to retard the financial development of that country, as it is entirely destructive to the unrestricted freedom of commercial intercourse between the centres of trade and the outlying parts of the country.

In all other commercial countries (except those which permit the levy of the Municipal "Octroi" duties), when foreign merchandise has satisfied all the Customs requirements at the port or place of entry, and passed the frontier, it is exempted from further taxation; but in Mexico, each State in the Republic has practically had its own Custom House system, and has levied taxes upon all merchandise, whether domestic or foreign, passing its borders.

In addition to State taxation, the several towns within the State again assess the same goods upon entering their respective town limits.

The State taxation is determined by the several State Legislatures, which varies in each State. In the Federal district (*i.e.*, the City of Mexico) the rate is said to be about 2 per cent. on the National Customs tariff. Mr. Consul Carden, in his report (No. 202) for the year 1886, has given us more complete detail of the taxes leviable in the Federal district of Mexico:—

1st.—The "Consumo" duty, which is leviable on all foreign goods introduced into the Federal district for consumption; goods in transit being exempted. The amount of this duty is 5 per cent. of the Customs import duties, payable according to the existing tariff; 80 per cent. of this sum goes into the Federal treasury, and the remaining 20 per cent. to the municipality where the goods are entered.

2nd.—The "Portazgo" duty, which is leviable on all goods of national production introduced into the Federal district. The amount payable on the different articles is regulated by a special tariff. Of the receipts from this duty, 60 per cent. goes into the Federal treasury, and 40 per cent. to the municipalities.

3rd.—The tax on occupied property, lands, or buildings situated within the city limits. The amount of this tax is 12 per cent. of the actual rent produced, or of the estimated rent, if the property is occupied by its owner. It is not leviable on empty houses. Of the amount produced by this tax, ten-twelfths goes into the Federal treasury, and two-twelfths into that of the municipality in which the property is situated.

4th.—The tax on country property, farms, etc. The amount of this tax is seven per thousand on the value as declared by the owners, subject to revision by Government appraisers. Of the amount collected, six-sevenths goes to the Federal treasury, and one-seventh to the municipalities.

5th.—The licence duty on business houses, workshops, and factories. The amount of this tax is regulated by a special tariff, in which a maximum and minimum quota is fixed to each department of commerce, and the amount, within these limits, which each establishment has to pay, is decided by a licensing board selected from among the owners of similar establishments. Seven-eighths of the produce of this tax goes to the Government, and one-eighth to the municipal.

6th.—The licence on professions is also regulated by a special tariff; the quota to be paid by each individual is decided in the same manner as in the preceding paragraph. This is exclusively a Federal tax.

7th.—The Stamp Tax, which was originally confined to the use of stamped paper for deeds and other public documents, was extended in 1885 to an indirect taxation on all sales of merchandise and other property, whether in large or small amounts, by means of receipt stamps, which were rendered obligatory under heavy penalties in the smallest possible transaction. The Stamp Act has a regular tariff appended to it—the item of receipts on sales amounting to $\frac{1}{2}$ per cent.

In the adjoining State of Hidalgo the State taxation is about 10 per cent. of the national tariff, and in some of the others it runs as high as 16 per cent. The municipal, or town taxation, is said to be about 9 per cent. of what the State has exacted, but in this there is no uniformity. These taxes are continually changing, and are sometimes so high as to be almost prohibitory of local trade.

The “excise” or “internal” system of taxation is essentially a tax on sales collected through the Agency of Stamps, and is in reality a repetition of the old Alcavala Tax of Spain, one of the worst forms of taxation that can be inflicted upon any country, and which has been largely responsible for the decay of Spanish manufactures and agriculture.

Thus, in addition to the import duties, which are already most oppressive to the consumers who are least able to bear it, the present system of of inter-state and internal taxation on trade is injurious to the commercial development of the country. We may, however, look upon the present condition of internal taxation in Mexico as in a transition state. This will be referred to in a subsequent paragraph.

The practice of locally taxing inter-state commerce is in direct contravention of an article in the Mexican Constitution of 1857, and it is said also to be in direct opposition to the decisions of the National Supreme Court. Several of the leading States of Mexico have at different times tried the experiment of prohibiting it by legislative enactments; but the States and Municipalities

of the country have been so often hard pressed to raise money for their current expenditures, and finding the taxation of merchandise in transit so easy a method of obtaining money, the federal authorities have not been able, nor yet perhaps willing, to prevent it.

On the 22nd of November, 1886, Article 124 of the Constitution again enacted "that no State should declare any tax upon merchandise in transit to the interior," the Federal Government reserving the right to tax foreign goods crossing the country for transhipment abroad. The Article further declared "that no State shall impede or restrict directly or indirectly, save for police measures, the entry or departure of merchandise into, or from, its territory, nor can it tax any articles shipped abroad, or to another State." Further "that there can be no discrimination in taxation: the same rate shall apply to each class of article, whatever the place of production." And further "that the free transit of domestic goods shall not be hampered nor subject to examination while in transit, nor shall any Custom House document be required for their circulation in the interior." Another law was passed on the 26th November, 1886, to the effect "that the tax on consumption which the States, the Federal District and the Territories, shall levy on articles, shall not exceed five per cent. of the import duties thereon." At present, however, the tax laws of the several States of Mexico are in a very unsettled condition, and the abolishing of the internal Custom House will cut off much of their revenue, for which a substitute is now being sought.

The Mexican tariff system also provides for the taxation of exports, notably on the following products: Gold bullion, one-fourth of one per cent. ; silver bullion, one-half of one per cent. ; orchil \$10 per ton, etc. There are also taxes on the exportation of fine cabinet woods, coffee, Henequen, etc.

FISCAL UNIFICATION.

The Mexican Government has, for a long time, fully realised that the imposition of duties on imported merchandise, both by the State and Municipal, Governments throughout the country, has greatly impeded its commerce; and a Conference was summoned, with delegates from each State, to arrange for the best method of removing this injurious system of taxation, without causing an embarrassing loss of revenue. This Conference was in Session from December, 1890, to April, 1891. The conclusions arrived at have not yet been finally acted upon, but will in all probability be adopted. These reforms will be of the greatest possible advantage to the internal trade of Mexico. It was further proposed—

1st.—That all interior Custom Houses shall be abolished, and that all imported merchandise which has paid the Customs duties at the port of entry shall pass unimpeded to its destination.

2nd.—In place of the existing Alcavala (internal) duties an indirect and uniform *ad valorem* tax shall be substituted, not exceeding 8 per cent.

upon all articles except tobacco and spirits. These duties shall be collected from consumers throughout the Republic in the form of stamps, which the National Government shall issue to the several States, as they shall make requisitions for them. This Stamp Act shall be imposed for twenty years from the 5th February, 1892.

3rd.—The tax upon tobacco and spirits shall be determined from time to time by special regulations.

4th.—The law authorising the States to impose a tax of 5 per cent. on the import duties, levied upon imported goods, shall be repealed, and no other taxation whatever shall be imposed upon imported merchandise except the regular Federal Customs dues, and the 8 per cent. Stamp tax already mentioned.

5th.—The revenues from the new 8 per cent. tax shall belong to the States collecting them. Those taxes collected in the Federal Districts and Territories shall be paid into the Federal treasury. Before this reform in the fiscal laws comes into operation, it will have to be approved by the Federal Congress and ratified by the several States.



APPENDIX D.

COINAGE, WEIGHTS, AND MEASURES.

From Bureau of American Republics, *Bulletin* No. 9.

The following table shows the coins now issued by the Mexican mints:—

Denomination.	Fineness.	Value in pesos.	Weight in—		Diameter in—	
			Grammes.	Troy ounces.	Millimetres.	Inches.
<i>Gold Coins:—*</i>						
Double hidalgo	875	20.00	33.841	1.0860	34	1.33858
Hidalgo	875	10.00	16.920	.5430	27	1.06299
Medio hidalgo	875	5.00	8.460	.2715	22	.86614
Quarto hidalgo	875	2.50	4.230	.13575	18	.70866
Decimo hidalgo	875	1.00	1.692	.05430	15	.59055
<i>Silver Coins:—*</i>						
Beso	901	1.00	27.973	.866	37	1.45669
50 centavos	901	.50	13.536	.433	30	1.18110
25 centavos	901	.25	6.768	.2165	25	.98425
10 centavos	901	.10	2.707	.0866	17	.66929

* There were formerly coined in gold the onza, = \$16 in silver; the medio onza, = .84; the pistola, = \$4; the escudo de oro, = \$2; and the escudo de oro, = \$1. In silver, the real, = .12 $\frac{1}{2}$; medio real, = .06 $\frac{1}{2}$.

The old-time weights and measures were founded on Spanish models; but, owing to the inexactness of the first standards and to subsequent changes, differ at present very widely from their originals.

The value in the metric system here assigned to each denomination of the old weights and measures is that fixed by the Mexican Government at the time of the adoption of the metric system.

LINEAR MEASURES.

				Kilometres,	Miles,
1 legua (league) = 5,000 varas	..	..	..	= 4·19	= 2·604375
1 vara (yard) = 3 pies	..	..	..	Metres, 0·83800	Feet, 2·749578
1 pie (foot) = 12 pulgadas	..	..	..	= 0·27933	= 0·916526
				Inches, 0·916520	
1 pulgada (inch) = 12 líneas, ..	..	..	..	= 0·02328	= 0·076377
1 linea (line) ..	..	..	..	= 0·00194	=

The vara is also divided (for dry goods selling) into palmos or cuartas (palms or quarters).

				Metres,	Feet,	Inches,
1 palmo or cuarta ..	..	..	..	= 0·209500	= 0·687394	= 8·248728

SUPERFICIAL, OR SQUARE MEASURE.

				Hectares,	Acres,
1 square legua ..	..	..	..	= 1,755·61	= 4·339·4
1 square vara ..	..	..	..	Square metres, 0·702344	Square feet, 7·59000
1 square pie ..	..	..	..	= 0·078027	= 0·839888
1 square palmo ..	..	..	..	Square inches, 0·043890	68·03094
1 square pulgada ..	..	..	..	= 0·000542	= 0·84012

LAND OR AGRARIAN MEASURES.

Spanish names.	Nearest English equivalent.	Length (varas).	Breadth (varas).	Hectares.	Acres.
Hacienda	25,000	5,000	8,778.0500000	21,697.000
Sitio de ganado mayor	5,000	5,000	1,755.6100000	4,339.400
Sitio de ganado menor	3,333 $\frac{1}{2}$	3,333 $\frac{1}{2}$	780.2711111	1,928.133
Fundo legal para pueblo	1,200	1,200	101.1231360	244.140
Labor	1,000	1,000	70.2244000	175.532
Caballeria de tierra	1,104	552	42.7953111	105.751
Fanega sembradura de maiz	276	184	3,566.2759	8.813
Solar para casa, molino, ó venta	Site for a house, mill, or inn	50	50	0.1755610	0.434

HYDROMETRIC MEASURES.

This is used for measuring and distributing water for irrigation and domestic uses:—

1 buel y (ox)	..	..	..	..	48 surcos.
1 surco (furrow)	..	..	..	..	3 naranjas.
1 naranja (orange)	..	..	..	..	8 reales or limones.
1 real (bit) or limon (lemon)	..	..	..	..	2 dedos.
1 dedo (finger)	..	..	..	..	9 pajas (straws).

According to the old ordinances of lands and waters, established in Spanish times, the buel y (water) was as much as would flow through an aperture 1 vara (0.838 metre) square, no head or pressure being mentioned. By a law of the Mexican Republic, of August 2nd, 1863, 1 surco is made equal to $6\frac{1}{2}$ litres per second for rural measures, and the paja is made equal to 0.45 litres per minute for town measurements. This distinction is intended to make the surco a unit for irrigation, while the paja is made the unit for distributing water to houses, etc., in towns.

CUBIC MEASURES.

	Cubic metre.	Cubic yard.
1 cubic vara	0.588480	0.769734
1 cubic pie	0.021795	0.769484
1 cubic palmo	0.000195	0.324634

DRY MEASURES.

1 carga	= 2 fanegas	:	:	:	181.029775	litres.
1 fanega	= 12 almudeas	:	:	:	90.814888	bushels.
						5.194357
						2.577178
1 almud	= 4 cuartillos	:	:	:	7.567907	pecks.
						0.859109
1 cuartillo (quart)		:	:	:	1.891977	Dry quarts.
						1.718122

OIL MEASURE.

1 cuartillo	..	..	..	..	0.506162	litre.
						Imperial pints.
						0.2592

WINE MEASURE.

1 cuartillo	..	..	..	..	0.456204	litre.
						Imperial pints.
						0.2875

COMMERCIAL WEIGHTS.

1 quintal	= 4 arrobas	:	:	:	46.024634	Kilogrammes.
1 arroba	= 25 libras	:	:	:	11.506159	Pounds avoirdupois.
1 libra (pound) = 16 onzas	..	..	..	..	0.460246	101.444
						25.361
						1.01444
1 onza (ounce) = 16 adarmes	..	..	..	..	0.028765	Ounces avoirdupois.
1 adarme (dram) = 36 granos	0.001798	1.0148
						0.00343
						Grains.

1 grano (grain)	0.0000499	0.77100
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In commerce there is used the following relation between the kilogramme and the pound (libra) different from the ratio as fixed by Government, viz.:—

1 kilogramme = 2.1733 pounds (libras).

There is also a weight called *carga*, used in commerce, in freighting, and in mining:—

1 carga = 12 arrobas = 300 pounds = 138.073902 kilogrammes = 304.332 pounds avoirdupois.

PRECIOUS METAL WEIGHTS.

				Kilogramme.	Ounces avoirdupois.
1 marco = 8 onzas	..	..	..	0.230123	8.1184
1 onza = 8 octavas	..	..	..	0.028765	1.0148
1 octava (eighth) — 6 tomines	..	..	..	0.003596	0.12685
					Grains.
1 tomin = 12 granos	..	..	..	0.000599	9.25920
1 grano ..	..	..	..	0.0000499	0.77160

WEIGHT OF COINS.

FINENESS. (GOLD).	Value.	Weight.	Weight.	Weight.	
				Grammes.	Grains.
875 gold, 125 copper to the 1,000	10.00	33.841	522.234	16.920	261.117
	5.00	8.460	130.558	4.230	65.279
	2.50	4.150	1.692	1.092	26.112
SILVER.					
9,027 to the 10,000	1.00	27.973	417.7903		
	0.50	13.536	208.8951		
	0.25	6.768	104.4475		
	0.10	2.707	41.7790		

The tolerance of gold coin is two-thousandths, more or less, than the exact fineness, and 75 milligrammes in weight on the \$20 piece, with a proportionate allowance for the lesser coins.

For silver the tolerance is three-thousandths, more or less, than the exact fineness, and 1 gramme in weight on the dollar piece, with proportionate allowance for the lesser coins.

APPENDIX E.

OFFICIAL DIRECTORY.

THE EXECUTIVE.

President of the Republic.—Gen. PORFIRIO DIAZ, National Palace.
Private residence, Calle Cadena, No. 8.

DEPARTMENT OF FOREIGN RELATIONS.

Secretary.—Sr. Lic. IGNACIO M. MARISCAL, Cerrada de la Moneda, 8.

Chief Clerk.—JOSE T. CUELLAN, Buenavista, 3½.

Chief of the Consular Bureau.—MANUEL ZAPATA VERA, Jesus, 10.

Chief of the European Bureau.—FELIX GALINDO, Esclavo, 9.

Chief of the Bureau of Archives and the Library.—FRANCISCO GARCIA CONDE, Ribera Santa Maria, 8.

Chief of the Bureau of Accounts.—FRANCISCO ELORRIAGA, Espalda San Andres, 10.

DEPARTMENT OF THE INTERIOR.

Secretary.—Sr. Lic. MANUEL ROMERO RUBIO, San Andres, 5 and 6.

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Private Secretary.—Lic. ROSENDO PINEDA, Patoni (Casa Lombardo).

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ERRATA.

On page 24, *Uruapam* should be *Uruapan*.

On page 34, *Chiapes* should be *Chiapas*.

On pages 44, 53, 54, 57 and 59 *Pueblo* should be *Puebla*.

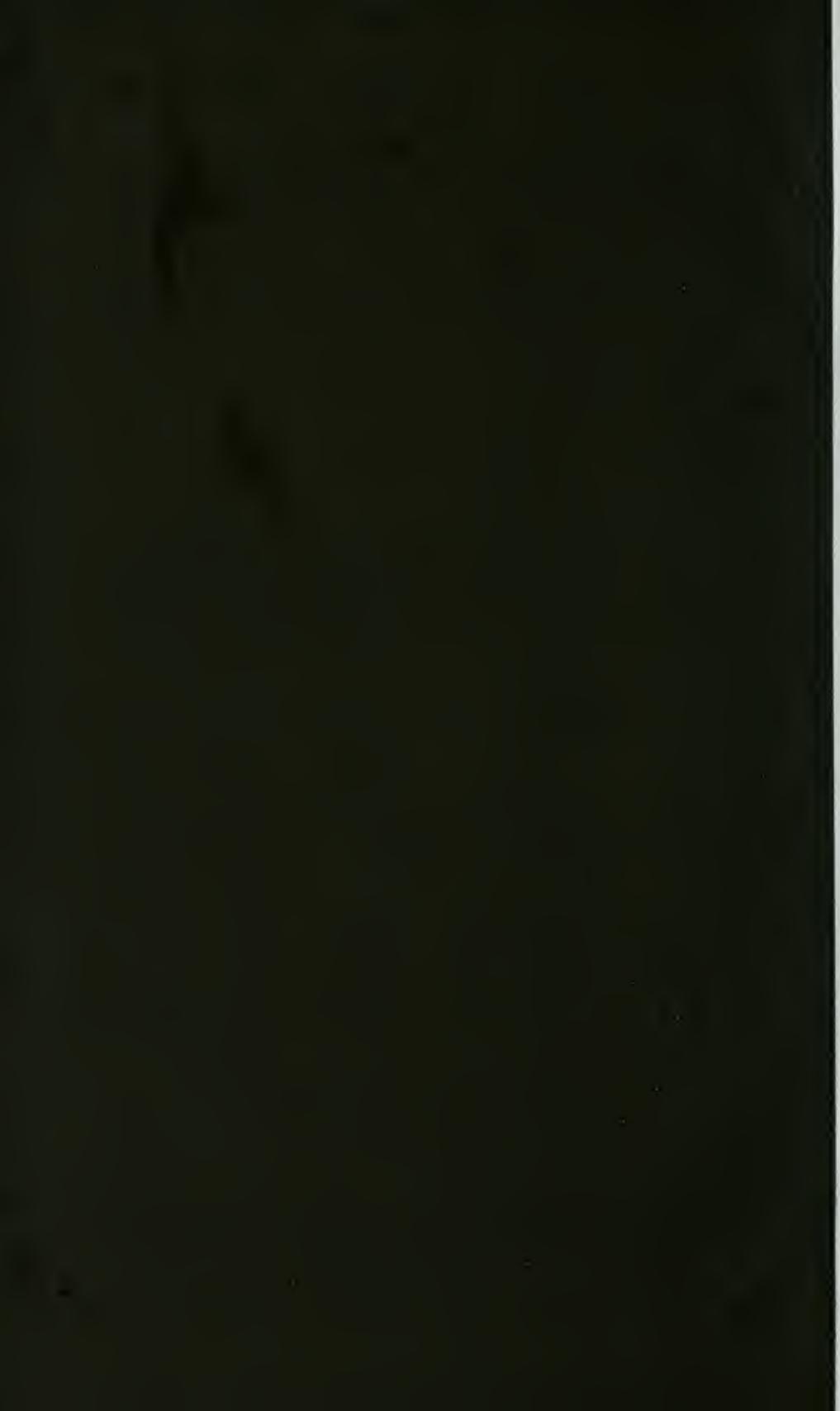
On page 52, *Satillo* should be *Saltillo*.

On page 53, *Ixmiquilpam* should be *Ixmiquilpan*.

On page 64, *Puebla* and *Guerrero* are two places, and not one only as appears.

On page 124, *Tuxpam* should be *Tuxpan*.

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